

Exhibit G

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Claim Elements	Representative MPS Power Control Products ^{1,2}
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¹ MPS has and continues to infringe U.S. Patent No. 6,936,999 (the “’999 Patent”) by making, using, selling, and/or offering for sale its DC\DC power converter and power module products that embody or practice, or are a material component of or are material in practicing, the inventions claimed in the ’999 Patent (the “Infringing Products”). For instance, as detailed in the chart below, MPS’s MPM3695 family of power modules infringe various claims of the ’999 Patent. The MPM3695 power modules are charted as representative products, and the theories of infringement for other Infringing Products, including mEZDPD1620A\AS, mEZDPD4506A\AS, MP5470, MP8796B, MP8843, MP8845, MP8854, MP8861, MP8869, MPM3695, MPM54304, MPM82504, MPQ8645P, MPQ8875A, MPQ8880, MPQ8883, and MPQ8886, are substantively the same as those provided herein because these products share the same, or substantially the same, infringing qualities as MPS’s MPM3695 product (i.e., being adapted for control, programming, and monitoring over a PMBus or other similar interface).

² MPS further induces and contributes to the infringement of the ’999 Patent by offering for sale and selling its Infringing Products and directing its customers through information and instructional materials on MPS’s website to use the Infringing Products in the manner set out in the representative claim chart below. For example, MPS makes available on its website one or more design tools that direct customers in the United States and this District to use the Infringing Products in a manner that infringes one or more claims of the ’999 Patent. *See, e.g.*, <https://www.monolithicpower.com/en/design-tools/design-tools.html> (last accessed on June 16, 2021). MPS further offers technical support to customers in the United States and this District directing its customers to use its Infringing Products in a manner that infringes one or more claims of each of the ’999 Patent. The technical support provided by MPS includes, but is not limited to, MPS’s Technical Forum (*see, e.g.*, <https://forum.monolithicpower.com/> (last accessed on June 17, 2021)), its MPS NOW customer support solution (*see, e.g.*, <https://www.monolithicpower.com/en/support/mps-now.html> (last accessed on June 17, 2021)), configuration, programming, and monitoring software (*see, e.g.*, <https://www.monolithicpower.com/en/virtual-bench-pro-3-0.html> and <https://www.monolithicpower.com/en/virtual-bench-pro-4-0.html> (last accessed June 16, 2021)), product webinars (*see, e.g.*, <https://www.monolithicpower.com/en/support/webinars.html> (last accessed June 16, 2021)), design simulation tools (*see, e.g.*, <https://www.monolithicpower.com/en/design-tools/design-tools.html> (last accessed June 16, 2021)), partnering opportunities (*see, e.g.*, <https://www.monolithicpower.com/en/applications/accelerator-cards.html> (last accessed June 16, 2021)), and partner reference designs (*see, e.g.*, <https://www.monolithicpower.com/design-tools/reference-design-partners.html> (last accessed June 16, 2021)), which direct and assist customers on how to use the Infringing Products in a manner that infringes one or more claims of each of the ’999 Patent. MPS further maintains a YouTube channel that instructs its customers how to use the Infringing Products in a manner that infringes one or more claims of the ’999 Patent, including a specific channel dedicated to its Infringing Products (*see, e.g.*, <https://www.youtube.com/c/MonolithicPowerSystems> and <https://www.youtube.com/playlist?list=PLADWxxBMy8Ck7mV4cofsyufCdJIRKUFTi>). Similarly, MPS offers and provides evaluation kits, *e.g.*, EVKT-MPM3695-25-A, which encourage its customers to design, implement and test its Infringing Products in a

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Claim Elements	Representative MPS Power Control Products ^{1,2}
1. A power control system comprising:	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, in a multi-module configuration form a power control system.</p> <p>The MPM3695 power modules comprise point-of-load regulators that accept varied input voltages and generate varied output voltages to an attached load. <i>See, e.g.</i>, MPM3695-10 Data Sheet at 1; MPM3695-25 Data Sheet at 1; MPM3695-100 Data Sheet at 1.</p> <p>MPS touts the “scalability” and “programmability” of the power modules as significant features. MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at 2 (“Figure 5: MPM3695 Series Offers Scalability and Programmability”); <i>see also</i> https://www.monolithicpower.com/en/products/power-modules.html (last accessed June 11, 2021); Power Module Flyer at 1.</p> <p>The power modules, for instance, are programmed and controlled over a Power Management Bus (or PMBus):</p>

manner that infringes the '999 Patent. As set out in the representative claim chart below and in the informational and instructional materials described above, the Infringing Products are used to practice the claimed inventions of the '999 Patent and are a material part of those claimed inventions, and MPS knows that its Infringing Products are especially made for or especially adapted for use in infringement of the '999 Patent, and that the Infringing Products are not a staple article or commodity of commerce suitable for substantial non-infringing use.

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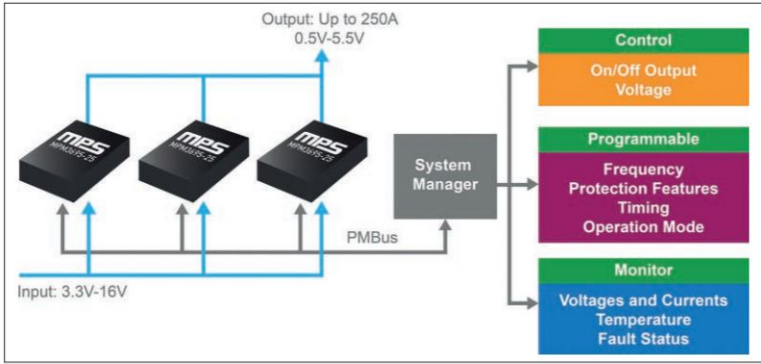
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>The diagram illustrates the architecture of MPS Power Control Products. On the left, three MPS MPM3695 power modules are shown. They receive an input of 3.3V-16V and provide an output of up to 250A at 0.5V-5.5V. These modules are connected to a central System Manager via a PMBus interface. The System Manager is further connected to a control block containing three main functional areas: Control (On/Off Output Voltage), Programmable (Frequency, Protection Features, Timing, Operation Mode), and Monitor (Voltages and Currents, Temperature, Fault Status).</p> <p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5; <i>see also</i> MPM3695-10 Data Sheet at 1 (“The MPM3695-10 is a scalable, ultra-thin, fully integrated power module with a PMBus interface . . . [that] offers module configurability.”); MPM3695-25 Data Sheet at 1 (“The MPM3695-25 is a scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations” with various parameters being “[p]rogrammable via PMBus.”); MPM3695-100 Data Sheet at 1 (“The MPM3695-100 is a 100A, scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations.”).</p> <p>Multiple MPM3695 power modules are configured to operate in a multi-module configuration (<i>e.g.</i>, in a multi-phased relationship) under the direction of a system manager or “controller” that controls, programs, and monitors each power module via a Power Management Bus (or PMBus).</p>

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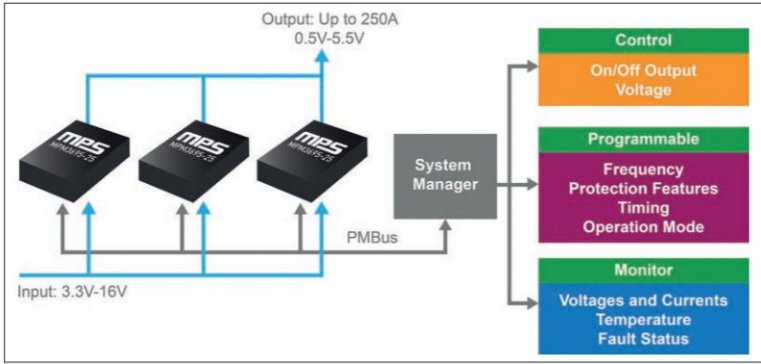
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>The diagram illustrates the architecture of MPS power control products. It features three MPM3695 modules connected to a central System Manager via a PMBus. The input voltage is 3.3V-16V, and the output is up to 250A at 0.5V-5.5V. The System Manager controls the modules and provides various functions categorized into Control, Programmable, and Monitor blocks.</p> <p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5. For example, an individual MPM3695 power module functions as a MASTER (with the other MPM3695 power modules acting as SLAVES) and serves as the system controller for the power control system.</p>

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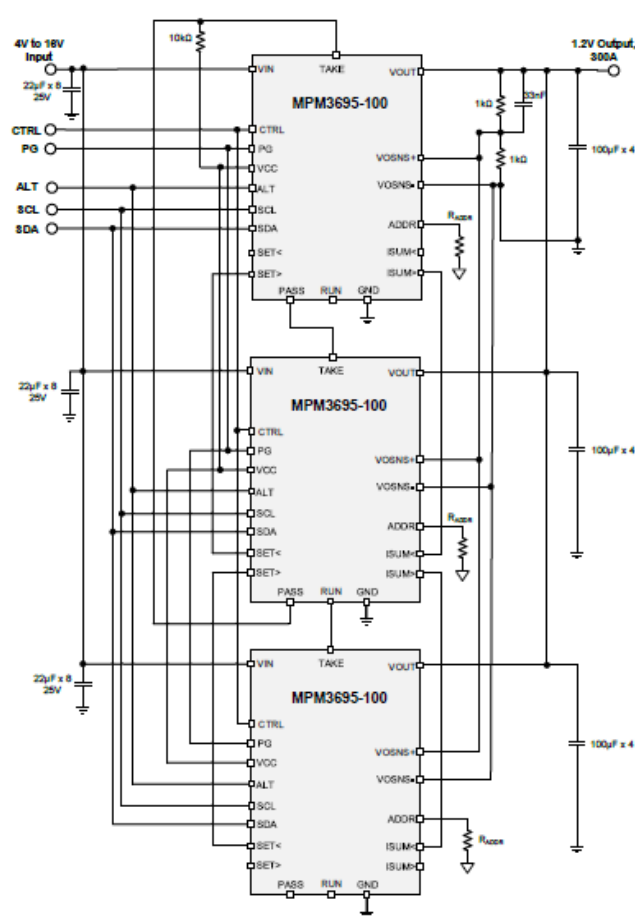
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p data-bbox="1029 1177 1617 1201">Figure 9: Typical Application Circuit (Three-Module Operation)</p> <p data-bbox="688 1218 1904 1291">MPM3695-100 Data Sheet at 49, Figure 9; <i>see also</i>, MPM3695-10 Data Sheet at 19; MPM3695-25 Data Sheet at 2, 21, 28; MPM3695-100 Data Sheet at 17-18, 48-50.</p>
a power supply controller adapted to transmit output data;	The MPM3695 modules in a multi-module configuration form a power control system that includes a system manager or host “controller” that is able to control, program, and monitor

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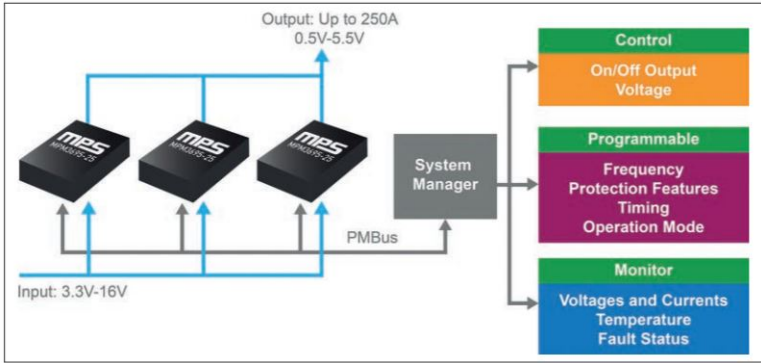
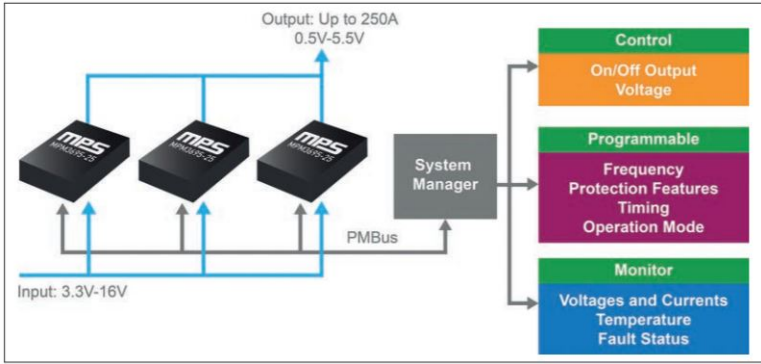
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>each power module via a PMBus.</p>  <p>The diagram illustrates a multi-module power control system. On the left, three MPS MPM3695 modules are shown. They are connected to a common input line labeled 'Input: 3.3V-16V'. The output of the modules is a common line labeled 'Output: Up to 250A 0.5V-5.5V'. A 'PMBus' line connects the modules to a 'System Manager' block. The System Manager is connected to a vertical stack of three functional blocks: 'Control' (green), 'Programmable' (purple), and 'Monitor' (blue). The 'Control' block contains 'On/Off Output Voltage'. The 'Programmable' block contains 'Frequency', 'Protection Features', 'Timing', and 'Operation Mode'. The 'Monitor' block contains 'Voltages and Currents', 'Temperature', and 'Fault Status'.</p> <p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5</p>
<p>a data bus connected to said power supply controller; and</p>	<p>The MPM3695 modules in a multi-module configuration form a power control system that includes a data bus connected to said power supply controller.</p> <p>As discussed above, the system manager is able to manage the MPM3695 power modules over a Power Management Bus (or PMBus).</p>  <p>This diagram is identical to the one in the first row, showing the MPS MPM3695 modules, input/output lines, PMBus connection to the System Manager, and the Control, Programmable, and Monitor functional blocks.</p>

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Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5. The PMBus is a two wire, bidirectional serial data bus that is based on the principles of I2C operation. <i>See, e.g.</i>, MPM3695-10 Data Sheet at 28; MPM3695-25 Data Sheet at 29; MPM3695-100 Data Sheet at 20.</p>
<p>at least one point-of-load (“POL”) regulator connected to said data bus, said at least one POL regulator comprising:</p>	<p>The MPM3695 modules in a multi-module configuration form a power control system that includes at least one point-of-load (“POL”) regulator connected to said data bus.</p> <p>The MPM3695 power modules comprise point-of-load regulators that accept varied input voltages and generate varied output voltages to an attached load. <i>See, e.g.</i>, MPM3695-10 Data Sheet at 1; MPM3695-25 Data Sheet at 1; MPM3695-100 Data Sheet at 1.</p> <p>MPS touts the “scalability” and “programmability” of the power modules as significant features. MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at 2 (“Figure 5: MPM3695 Series Offers Scalability and Programmability”); <i>see also</i> https://www.monolithicpower.com/en/products/power-modules.html (last accessed June 11, 2021); Power Module Flyer at 1.</p> <p>The power modules, for instance, are programmed and controlled over a Power Management Bus (or PMBus):</p> <div data-bbox="915 976 1661 1336" data-label="Diagram"> </div> <p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5; <i>see also</i> MPM3695-</p>

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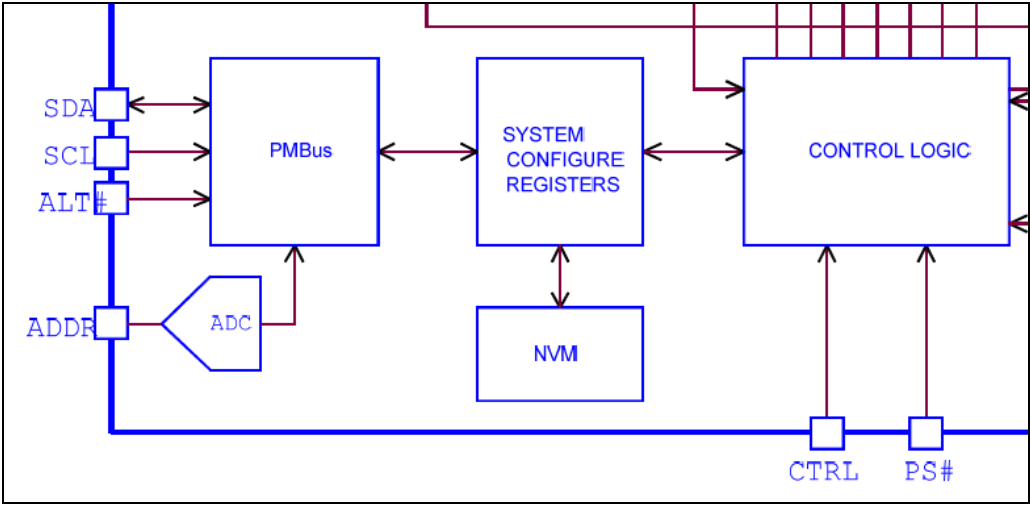
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>10 Data Sheet at 1 (“The MPM3695-10 is a scalable, ultra-thin, fully integrated power module with a PMBus interface . . . [that] offers module configurability.”); MPM3695-25 Data Sheet at 1 (“The MPM3695-25 is a scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations” with various parameters being “[p]rogrammable via PMBus.”); MPM3695-100 Data Sheet at 1 (“The MPM3695-100 is a 100A, scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations.”).</p>
<p>a storage device adapted to store said output data;</p>	<p>The MPM3695 power modules in the power control system described above include a storage device adapted to store said output data.</p> <p>As noted above, the MPM3695 power modules receive control and programming information via the PMBus interface, which may allow for the adjustment of various output conditions, including voltage set-point (VOUT_COMMAND). <i>See, e.g.</i>, MPM3695-25 Data Sheet at 38, 40-41. The command data received from the PMBus are written to specific registers. <i>See, e.g.</i>, MPM3695-25 Data Sheet at 33-34.</p>  <p><i>See, e.g.</i>, MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>

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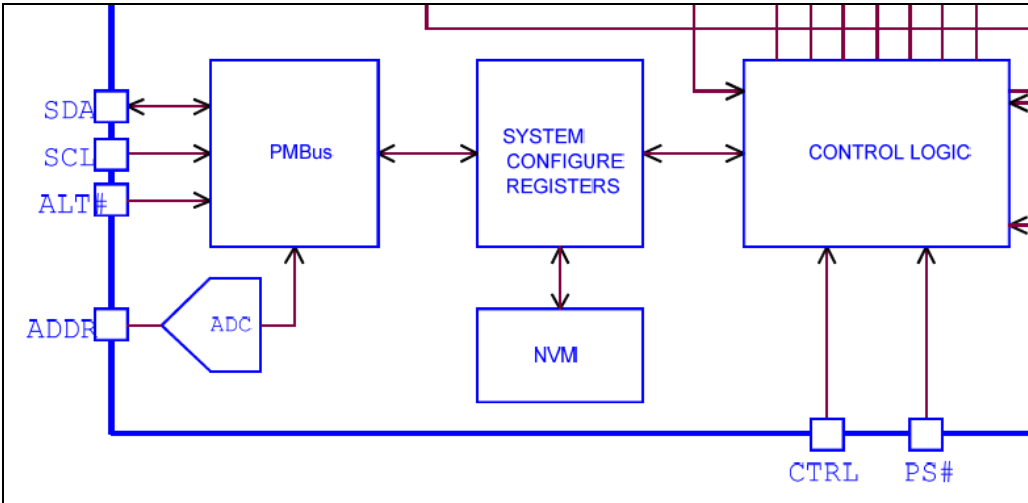
Claim Elements	Representative MPS Power Control Products ^{1,2}
<p>an output builder adapted to generate an output; and</p>	<p>The MPM3695 power modules in the power control system described above include an output builder adapted to generate an output.</p> <p>As noted above, the MPM3695 power modules provide a regulated output voltage to a load. The power modules receive control and programming information via the PMBus interface, which enable and allow for the adjustment of various output conditions.</p> <p>The MPM3695, for example, are placed into operation based on an OPERATION and/or ON_OFF_CONFIG command received over the PMBus. <i>See, e.g.</i>, MPM3695 Data Sheet at 35. The output voltage is adjustable over the PMBus through the VOUT_COMMAND (voltage set-point command). <i>See, e.g.</i>, MPM3695-25 Data Sheet at 38, 40-41. The command data received from the PMBus are written to specific registers. <i>See, e.g.</i>, MPM3695-25 Data Sheet at 33-34.</p>  <p><i>See, e.g.</i>, MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
<p>a control unit adapted to determine at least one timing parameter of said output in accordance with said output</p>	<p>The MPM3695 power modules in the power control system described above include a control unit adapted to determine at least one timing parameter of said output in accordance with said</p>

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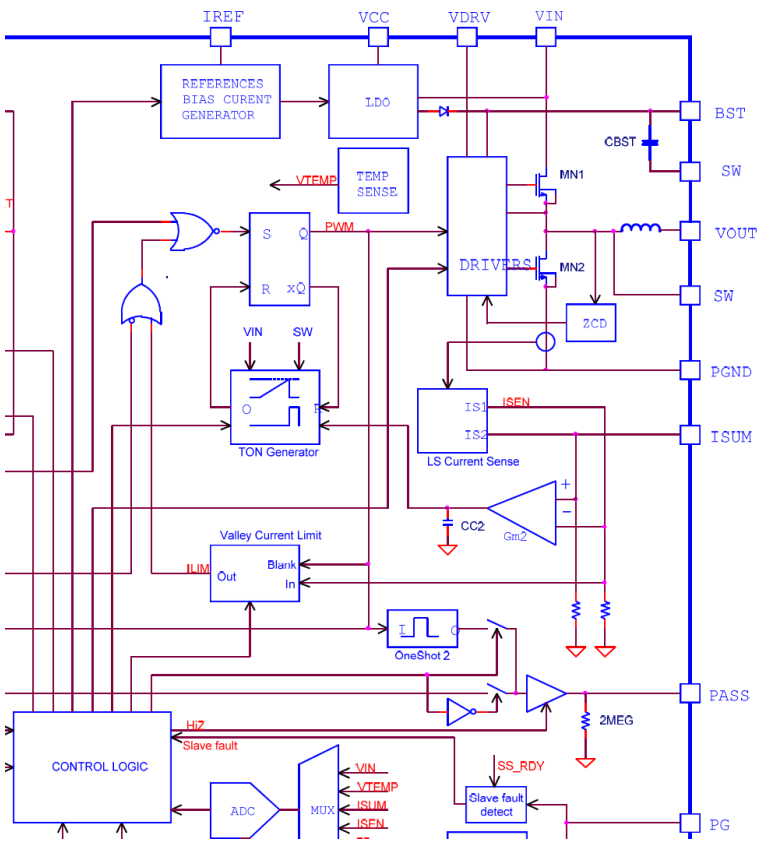
Claim Elements	Representative MPS Power Control Products ^{1,2}
data.	<p>output data.</p> <p>As discussed above, control and programming information for the power modules is received over the PMBus interface. The programming information includes a turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), MPM3695-25 Data Sheet at 42, and a slew rate of an output voltage transition (via the MFR_VOUT_STEP command), MPM3695-25 Data Sheet at 50.</p> 

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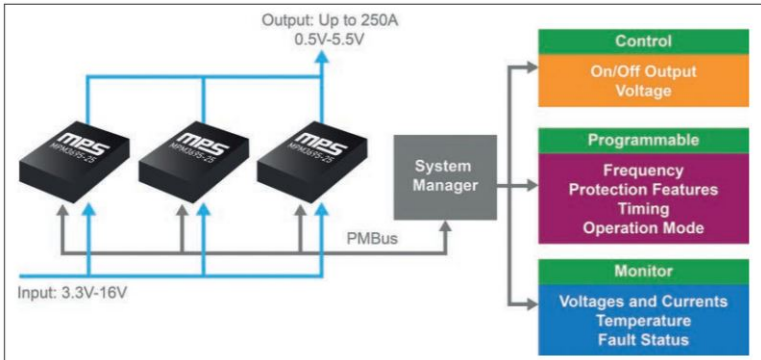
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p><i>See, e.g.</i>, MPM3695-25 Data Sheet at 19 (cropped for clarity).</p> <p>Once set, these parameters are used by control logic to affect a desired output by the power module, which determines at least one timing parameter of said output based on the set parameters. <i>See, e.g.</i>, MPM3695-25 Data Sheet at 8, 32-34.</p>
<p>2. A power control system comprising:</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, in a multi-module configuration form a power control system.</p> <p>The MPM3695 power modules comprise point-of-load regulators that accept varied input voltages and generate varied output voltages to an attached load. <i>See, e.g.</i>, MPM3695-10 Data Sheet at 1; MPM3695-25 Data Sheet at 1; MPM3695-100 Data Sheet at 1.</p> <p>MPS touts the “scalability” and “programmability” of the power modules as significant features. MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at 2 (“Figure 5: MPM3695 Series Offers Scalability and Programmability”); <i>see also</i> https://www.monolithicpower.com/en/products/power-modules.html (last accessed June 11, 2021); Power Module Flyer at 1.</p> <p>The power modules, for instance, are programmed and controlled over a Power Management Bus (or PMBus):</p> 

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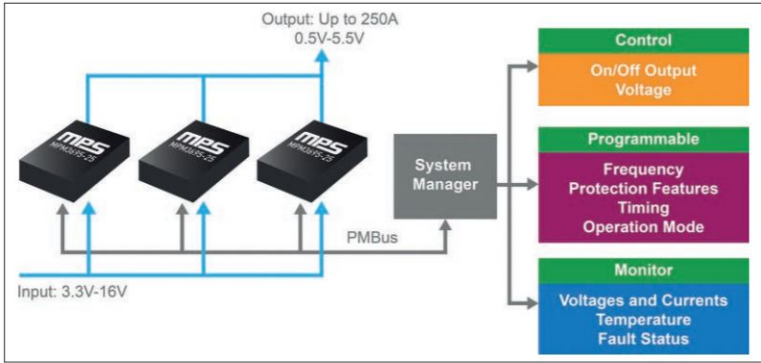
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5; see also MPM3695-10 Data Sheet at 1 (“The MPM3695-10 is a scalable, ultra-thin, fully integrated power module with a PMBus interface . . . [that] offers module configurability.”); MPM3695-25 Data Sheet at 1 (“The MPM3695-25 is a scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations” with various parameters being “[p]rogrammable via PMBus.”); MPM3695-100 Data Sheet at 1 (“The MPM3695-100 is a 100A, scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations.”).</p> <p>Multiple MPM3695 power modules are configured to operate in a multi-module configuration (e.g., in a multi-phased relationship) under the direction of a system manager or “controller” that controls, programs, and monitors each power module via a Power Management Bus (or PMBus).</p>  <p>The diagram illustrates a multi-module power control system. On the left, three black rectangular power modules, each labeled 'mes' and 'MPM3695', are shown. They are connected to a common input line labeled 'Input: 3.3V-16V'. The output of the modules is a single line labeled 'Output: Up to 250A 0.5V-5.5V'. A 'System Manager' block is connected to the modules via a 'PMBus' line. The System Manager is also connected to a vertical stack of three functional blocks: 'Control' (orange), 'Programmable' (green), and 'Monitor' (blue). The 'Control' block contains 'On/Off Output Voltage'. The 'Programmable' block contains 'Frequency Protection Features', 'Timing', and 'Operation Mode'. The 'Monitor' block contains 'Voltages and Currents', 'Temperature', and 'Fault Status'.</p> <p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5. For example, an individual MPM3695 power module functions as a MASTER (with the other MPM3695 power modules acting as SLAVES) and serves as the system controller for the power control system.</p>

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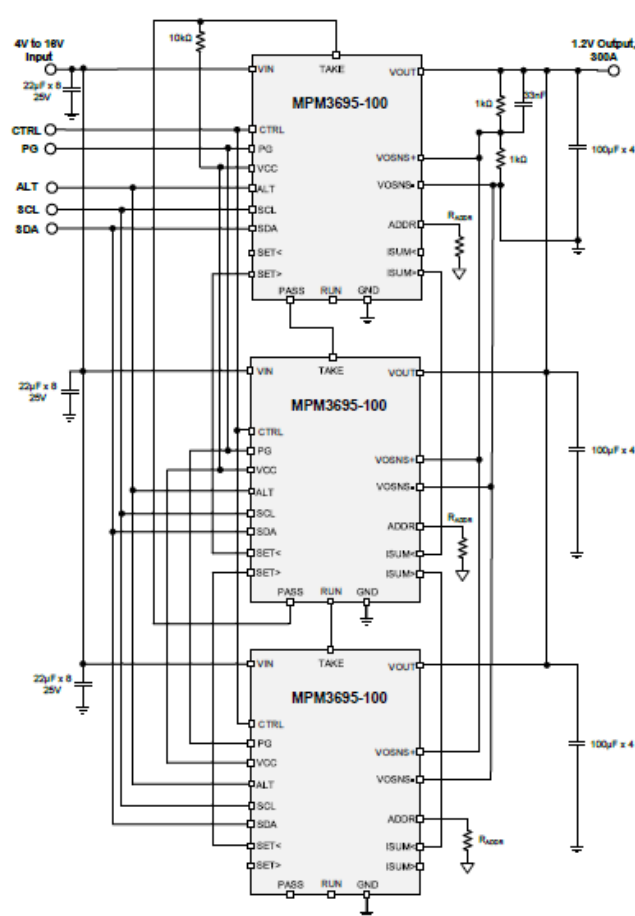
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	 <p data-bbox="1029 1177 1617 1201">Figure 9: Typical Application Circuit (Three-Module Operation)</p> <p data-bbox="688 1218 1911 1291">MPM3695-100 Data Sheet at 49, Figure 9; <i>see also</i>, MPM3695-10 Data Sheet at 19; MPM3695-25 Data Sheet at 2, 21, 28; MPM3695-100 Data Sheet at 17-18, 48-50.</p>
a power supply controller adapted to transmit output data;	The MPM3695 modules in a multi-module configuration form a power control system that includes a system manager or host “controller” that is able to control, program, and monitor

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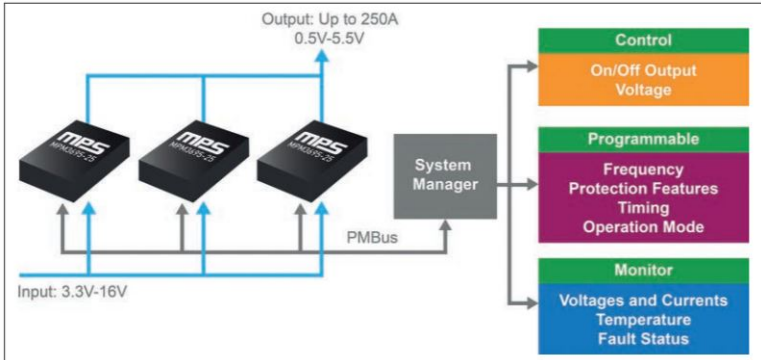
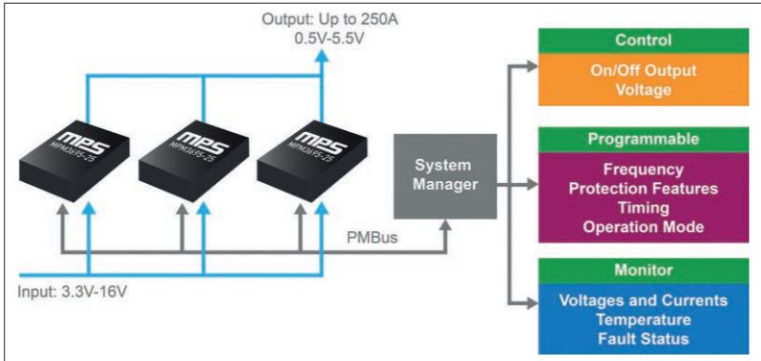
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>each power module via a PMBus.</p>  <p>The diagram illustrates a multi-module power control system. On the left, three MPS MPM3695 modules are shown. They are connected to a common input line labeled 'Input: 3.3V-16V'. Each module has an upward-pointing arrow indicating input. The modules are connected to a common output line labeled 'Output: Up to 250A 0.5V-5.5V'. Each module has an upward-pointing arrow indicating output. A 'System Manager' block is connected to the modules via a 'PMBus'. The System Manager is also connected to a vertical stack of three functional blocks: 'Control' (orange), 'Programmable' (green), and 'Monitor' (blue). The 'Control' block contains 'On/Off Output Voltage'. The 'Programmable' block contains 'Frequency', 'Protection Features', 'Timing', and 'Operation Mode'. The 'Monitor' block contains 'Voltages and Currents', 'Temperature', and 'Fault Status'.</p> <p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5</p>
<p>a data bus connected to said power supply controller; and</p>	<p>The MPM3695 modules in a multi-module configuration form a power control system that includes a data bus connected to said power supply controller.</p> <p>As discussed above, the system manager is able to manage the MPM3695 power modules over a Power Management Bus (or PMBus).</p>  <p>This diagram is identical to the one in the first row, showing the MPS MPM3695 modules, System Manager, and functional blocks (Control, Programmable, Monitor) connected via a PMBus.</p>

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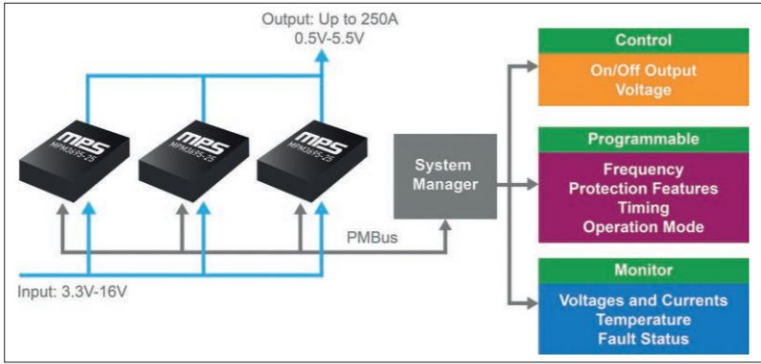
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	<p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5. The PMBus is a two wire, bidirectional serial data bus that is based on the principles of I2C operation. <i>See, e.g.</i>, MPM3695-10 Data Sheet at 28; MPM3695-25 Data Sheet at 29; MPM3695-100 Data Sheet at 20.</p>
<p>at least one point-of-load (“POL”) regulator connected to said data bus, said at least one POL regulator comprising:</p>	<p>The MPM3695 modules in a multi-module configuration form a power control system that includes at least one point-of-load (“POL”) regulator connected to said data bus.</p> <p>The MPM3695 power modules comprise point-of-load regulators that accept varied input voltages and generate varied output voltages to an attached load. <i>See, e.g.</i>, MPM3695-10 Data Sheet at 1; MPM3695-25 Data Sheet at 1; MPM3695-100 Data Sheet at 1.</p> <p>MPS touts the “scalability” and “programmability” of the power modules as significant features. MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at 2 (“Figure 5: MPM3695 Series Offers Scalability and Programmability”); <i>see also</i> https://www.monolithicpower.com/en/products/power-modules.html (last accessed June 11, 2021); Power Module Flyer at 1.</p> <p>The power modules, for instance, are programmed and controlled over a Power Management Bus (or PMBus):</p> 

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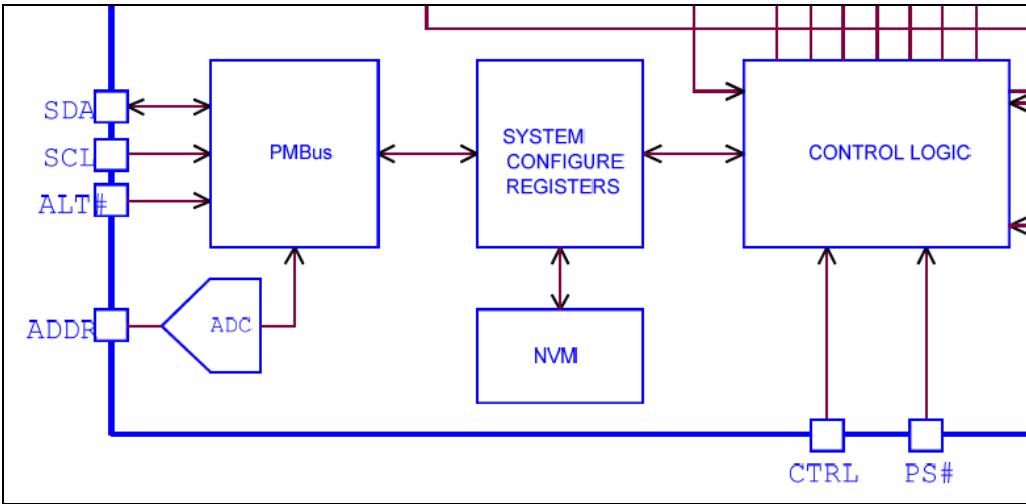
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5; <i>see also</i> MPM3695-10 Data Sheet at 1 (“The MPM3695-10 is a scalable, ultra-thin, fully integrated power module with a PMBus interface . . . [that] offers module configurability.”); MPM3695-25 Data Sheet at 1 (“The MPM3695-25 is a scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations” with various parameters being “[p]rogrammable via PMBus.”); MPM3695-100 Data Sheet at 1 (“The MPM3695-100 is a 100A, scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations.”).</p>
a storage device adapted to store said output data;	<p>The MPM3695 power modules in the power control system described above include a storage device adapted to store said output data.</p> <p>As noted above, the MPM3695 power modules receive control and programming information via the PMBus interface, which may allow for the adjustment of various output conditions, including voltage set-point (VOUT_COMMAND). <i>See, e.g.</i>, MPM3695-25 Data Sheet at 38, 40-41. The command data received from the PMBus are written to specific registers. <i>See, e.g.</i>, MPM3695-25 Data Sheet at 33-34.</p>  <p><i>See, e.g.</i>, MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

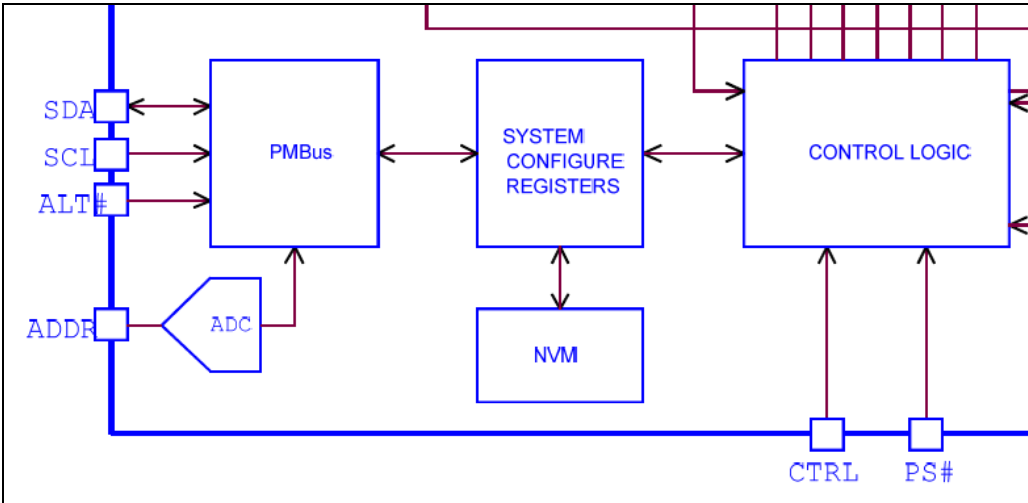
Claim Elements	Representative MPS Power Control Products ^{1,2}
<p>an output builder adapted to generate an output; and</p>	<p>The MPM3695 power modules in the power control system described above include an output builder adapted to generate an output.</p> <p>As noted above, the MPM3695 power modules provide a regulated output voltage to a load. The power modules receive control and programming information via the PMBus interface, which enable and allow for the adjustment of various output conditions.</p> <p>The MPM3695, for example, are placed into operation based on an OPERATION and/or ON_OFF_CONFIG command received over the PMBus. <i>See, e.g.</i>, MPM3695 Data Sheet at 35. The output voltage is adjustable over the PMBus through the VOUT_COMMAND (voltage set-point command). <i>See, e.g.</i>, MPM3695-25 Data Sheet at 38, 40-41. The command data received from the PMBus are written to specific registers. <i>See, e.g.</i>, MPM3695-25 Data Sheet at 33-34.</p>  <p><i>See, e.g.</i>, MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
<p>a control unit adapted to determine at least one timing parameter of said output in accordance with said output</p>	<p>The MPM3695 power modules in the power control system described above include a control unit adapted to determine at least one timing parameter of said output in accordance with said</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

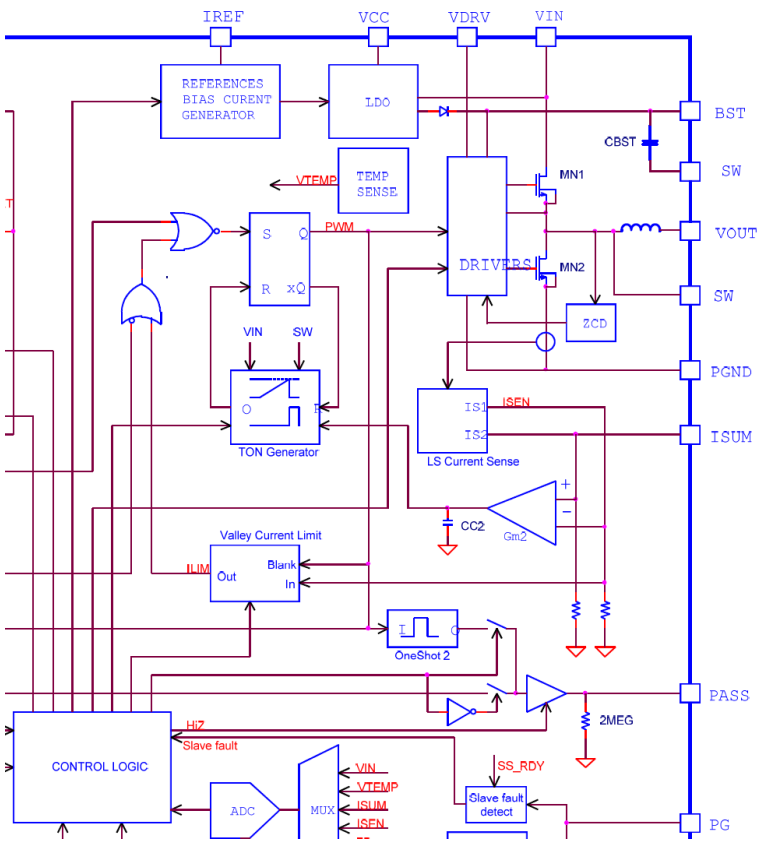
Claim Elements	Representative MPS Power Control Products ^{1,2}
data;	<p>output data.</p> <p>As discussed above, control and programming information for the power modules is received over the PMBus interface. The programming information includes a turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), MPM3695-25 Data Sheet at 42, and a slew rate of an output voltage transition (via the MFR_VOUT_STEP command), MPM3695-25 Data Sheet at 50.</p> 

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p><i>See, e.g.</i>, MPM3695-25 Data Sheet at 19 (cropped for clarity).</p> <p>Once set, these parameters are used by control logic to affect a desired output by the power module, which determines at least one timing parameter of said output based on the set parameters. <i>See, e.g.</i>, MPM3695-25 Data Sheet at 8, 32-34.</p>
<p>wherein said output data further comprises at least one of turn-on data providing a command to turn-on the corresponding POL regulator, voltage set-point data providing a desired output voltage of the corresponding POL regulator, slew-rate data providing a rate of change of output voltage of the corresponding POL regulator, turn-off data providing a command to turn off the corresponding POL regulator, and sequencing data providing a delay period between either a turn-on or turn-off command and actual generation of a corresponding output.</p>	<p>The output data received and employed by the MPM3695 power modules includes turn-on data, voltage set-point data, slew-rate data, turn-off data, or sequencing data.</p> <p>The MPM3695 power modules, for example, receive a message over the PMBus with turn-on data providing a command to turn-on the corresponding POL regulator (OPERATION and/or ON_OFF_CONFIG), voltage set-point data providing a desired output voltage of the corresponding POL regulator (VOUT_COMMAND), slew-rate data providing a rate of change of output voltage of the corresponding POL regulator (MFR_VOUT_STEP), turn-off data providing a command to turn off the corresponding POL regulator (OPERATION and/or ON_OFF_CONFIG), and sequencing data providing a delay period between either a turn-on or turn-off command and actual generation of a corresponding output (<i>e.g.</i>, a turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY). <i>See, e.g.</i>, MPM3695-25 Data Sheet at 35, 38, 40-42, 50.</p>
<p>3. The power control system of claim 2, wherein said control unit is further adapted to determine a turn-on period to generate desired output in accordance with at least one of said turn-on data, said sequencing data, said slew rate data, and said voltage set point data.</p>	<p>The control unit in the power control system of claim 2 discussed above can be further adapted to determine a turn-on period to generate desired output based on one of turn-on data, sequencing data, slew rate data, and said voltage set point data.</p> <p>The MPM3695 power modules, for example, receive a message over the PMBus with turn-on data providing a command to turn-on the corresponding POL regulator (OPERATION and/or ON_OFF_CONFIG), sequencing data providing a delay period between a turn-on command and output generation, <i>e.g.</i>, a turn-on rise/delay (TON_RISE, TON_DELAY), slew-rate data providing a rate of change of output voltage of the corresponding POL regulator</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Claim Elements	Representative MPS Power Control Products ^{1,2}
	(MFR_VOUT_STEP), and voltage set-point data providing a desired output voltage of the corresponding POL regulator (VOUT_COMMAND). <i>See, e.g.</i> , MPM3695-25 Data Sheet at 35, 38, 40-42, 50.
4. The power control system of claim 2, wherein said control unit is further adapted to determine a turn-off period of time to terminate a selected output in accordance with at least one of said turn-off data, said sequencing data, said slew rate data, and said voltage set point data.	<p>The control unit in the power control system of claim 2 discussed above can be further adapted to determine a turn-off period of time to terminate a selected output based on one of turn-off data, sequencing data, slew rate data, and said voltage set point data.</p> <p>The MPM3695 power modules, for example, receive a message over the PMBus with turn-off data providing a command to turn-off the corresponding POL regulator (OPERATION and/or ON_OFF_CONFIG), sequencing data providing a delay period between a turn-off command and termination of voltage output, <i>e.g.</i>, a turn-off delay (TOFF_DELAY), slew-rate data providing a rate of change of output voltage of the corresponding POL regulator (MFR_VOUT_STEP), and voltage set-point data providing a desired output voltage of the corresponding POL regulator (VOUT_COMMAND). <i>See, e.g.</i>, MPM3695-25 Data Sheet at 35, 38, 40-42, 50.</p>
5. The power control system of claim 3, wherein said turn-on period is provided by said power supply controller in said sequencing data.	<p>In the control unit in the power control system of claim 2 discussed above said turn-on period is provided by said power supply controller in said sequencing data.</p> <p>As discussed above, the MPM3695 power modules determine their turn-on period through sequencing data provided by the power supply controller, <i>e.g.</i>, as turn-on rise/delay commands (TON_RISE, TON_DELAY). <i>See, e.g.</i>, MPM3695-25 Data Sheet at 50.</p>
6. The power control system of claim 3, wherein said turn-on period is calculated by said control unit using said sequencing data, said slew rate data, and said voltage set point data.	<p>In the control unit in the power control system of claim 3 discussed above said turn-on period is calculated by said control unit using said sequencing data, said slew rate data, and said voltage set point data.</p> <p>As discussed above, the MPM3695 power modules calculate their turn-on period through sequencing data, slew rate data, and voltage set point data provided by the power supply controller. <i>See, e.g.</i>, MPM3695-25 Data Sheet at 35, 38, 40-42, 50.</p>
7. The power control system of claim	The MPM4695 power modules in the power control system of claim 1 include a storage device

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

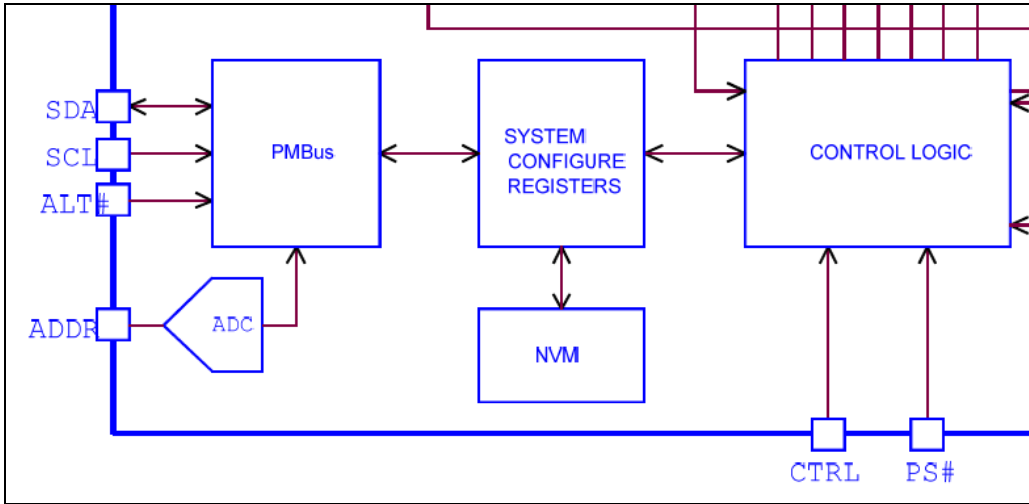
Claim Elements	Representative MPS Power Control Products ^{1,2}
<p>1, wherein said storage device further comprises at least one register.</p>	<p>adapted to store said output data that comprises at least one register.</p> <p>As discussed above, the MPM3695 power modules receive control and programming information via the PMBus interface, which allow for the adjustment of various output conditions. MPM3695-25 Data Sheet at 38, 40-41. The command data received from the PMBus are written to specific registers and/or to longer term storage (<i>i.e.</i>, non-volatile memory (NVM)). <i>See, e.g.</i>, MPM3695-25 Data Sheet at 33-34.</p>  <p><i>See, e.g.</i>, MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
<p>8. The power control system of claim 1, wherein said data bus further comprises a bi-directional serial bus.</p>	<p>The power control system of claim 1 includes a data bus connected to said power supply controller that comprises a bi-directional serial bus.</p> <p>As discussed above, the MPM3695 power modules are programmed over a PMBus.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

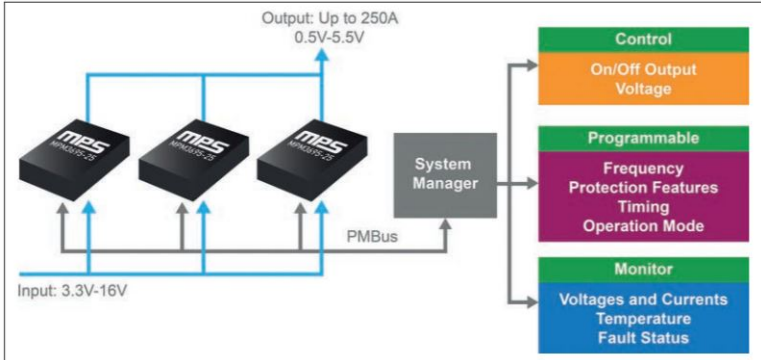
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5; <i>see also</i> MPM3695-10 Data Sheet at 1 (“The MPM3695-10 is a scalable, ultra-thin, fully integrated power module with a PMBus interface . . . [that] offers module configurability.”); MPM3695-25 Data Sheet at 1 (“The MPM3695-25 is a scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations” with various parameters being “[p]rogrammable via PMBus.”); MPM3695-100 Data Sheet at 1 (“The MPM3695-100 is a 100A, scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations.”).</p> <p>The PMBus is a bidirectional serial interface, consisting of a data line (SDA) and a clock line (SCL), that allows for configuration of the power module and monitoring of key parameters. <i>See, e.g.</i>, MPM3695-10 Data Sheet at 28; MPM3695-25 Data Sheet at 29; MPM3695-100 Data Sheet at 20.</p>
9. A method of determining at least one output-timing parameter of at least one point-of-load (“POL”) regulator comprising:	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform a method of determining at least one output-timing parameter of at least one point-of-load (“POL”) regulator.</p> <p>The MPM3695 power modules comprise point-of-load regulators that accept varied input voltages and generate varied output voltages to an attached load. <i>See, e.g.</i>, MPM3695-10 Data Sheet at 1; MPM3695-25 Data Sheet at 1; MPM3695-100 Data Sheet at 1.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

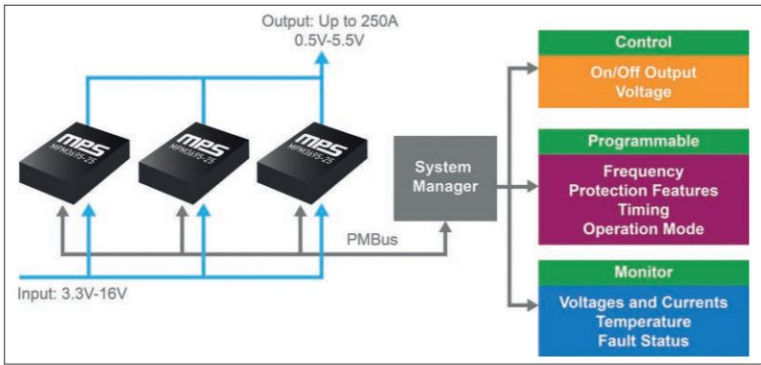
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>MPS touts the “scalability” and “programmability” of the power modules as significant features. MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at 2 (“Figure 5: MPM3695 Series Offers Scalability and Programmability”); <i>see also</i> https://www.monolithicpower.com/en/products/power-modules.html (last accessed June 11, 2021); Power Module Flyer at 1.</p> <p>The power modules, for instance, are programmed and controlled over a Power Management Bus (or PMBus):</p>  <p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5; <i>see also</i> MPM3695-10 Data Sheet at 1 (“The MPM3695-10 is a scalable, ultra-thin, fully integrated power module with a PMBus interface . . . [that] offers module configurability.”); MPM3695-25 Data Sheet at 1 (“The MPM3695-25 is a scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations” with various parameters being “[p]rogrammable via PMBus.”); MPM3695-100 Data Sheet at 1 (“The MPM3695-100 is a 100A, scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations.”).</p> <p>The timing parameters of the MPM3695, for instance, are set over the PMBus. These programmable timing parameters include a turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), MPM3695-25 Data Sheet at 42, and a slew rate of an</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

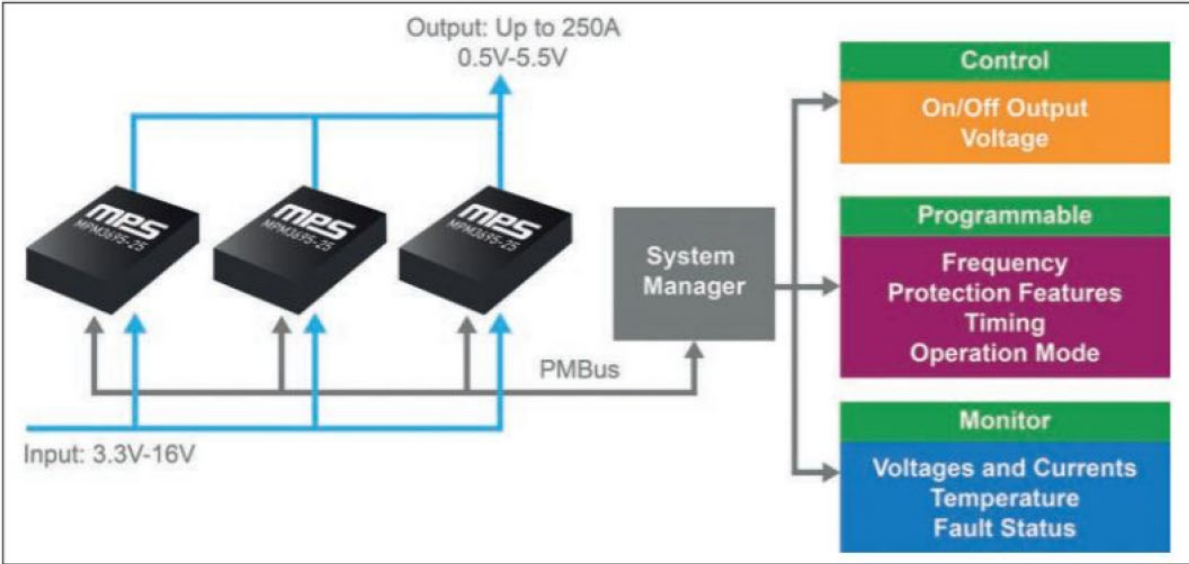
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>output voltage transition (via the MFR_VOUT_STEP command), MPM3695-25 Data Sheet at 50. Once set, these parameters are used to affect a desired output by the power module. MPM3695-25 Data Sheet at 8, 32-34.</p>
<p>receiving output-timing data from a controller;</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of receiving output-timing data from a controller.</p> <p>As discussed above, the MPM3695 power modules are connected to a common power management data bus (PMBus), over which output-timing data commands is received.</p>  <p>Figure 5: MPM3695 Series Offers Scalability and Programmability</p> <p>Yang, Monolithic Power, <i>Intelligent Scalable DC-DC Power Modules</i>, at Fig. 5.</p> <p>In particular, the controller transmits 1 to 2-byte commands for turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), or voltage transition slew rate</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

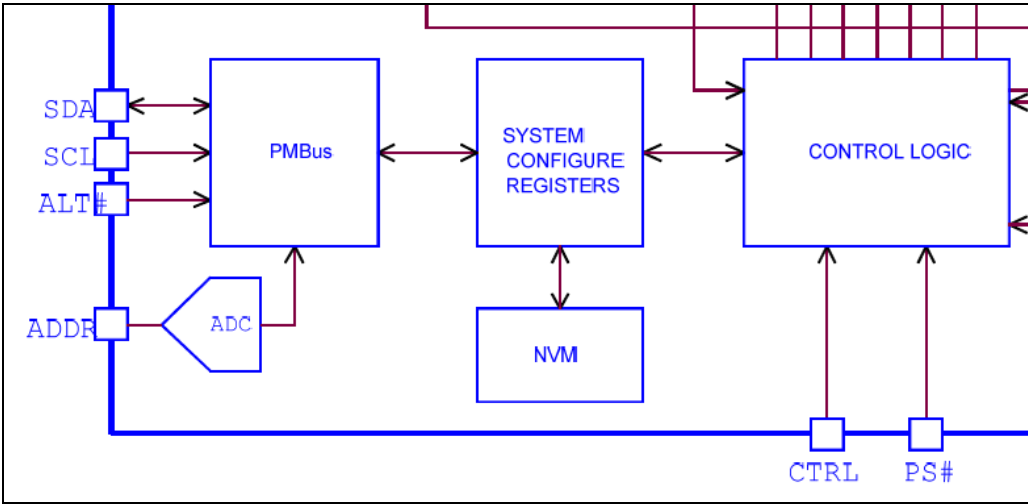
Claim Elements	Representative MPS Power Control Products ^{1,2}
	(MFR_VOUT_STEP). MPM3695-25 Data Sheet at 42, 50.
storing said output-timing data in a POL storage device;	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of storing said output-timing data in a POL storage device.</p> <p>The output-timing data received from the PMBus are written to specific registers and/or non-volatile memory (e.g., Multiple Time Program or MTP cells). MPM3695-25 Data Sheet at 32-34, 36 (STORE_USER_ALL command).</p>  <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
generating an output of said at least one POL regulator; and	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of generating an output of said at least one POL regulator.</p> <p>The MPM3695 power modules provide an output voltage to a connected load, with output voltage parameters being programmable via the PMBus. MPM3695 Data Sheet at 23.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

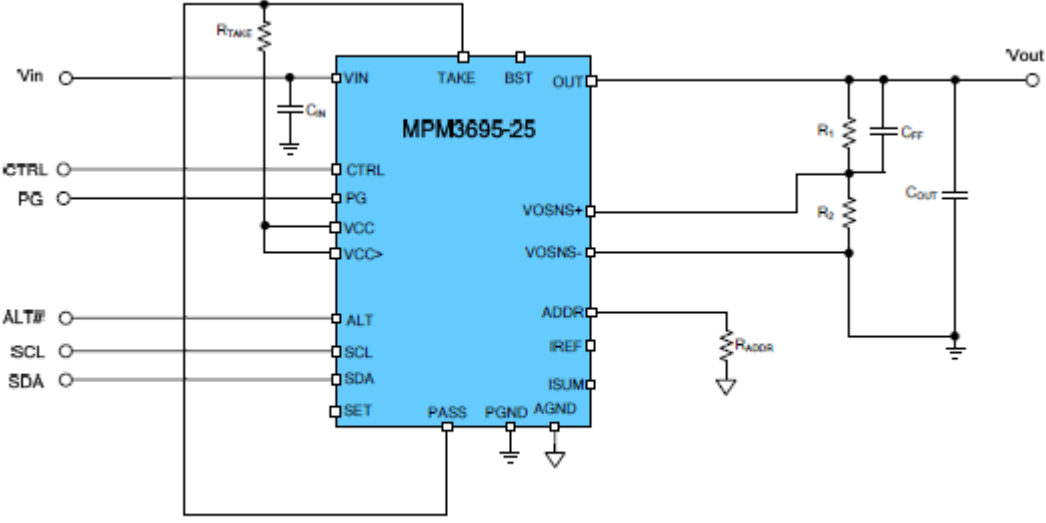
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p style="text-align: center;">Single Phase Operation</p> <p>MPM3695 Data Sheet at 2.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

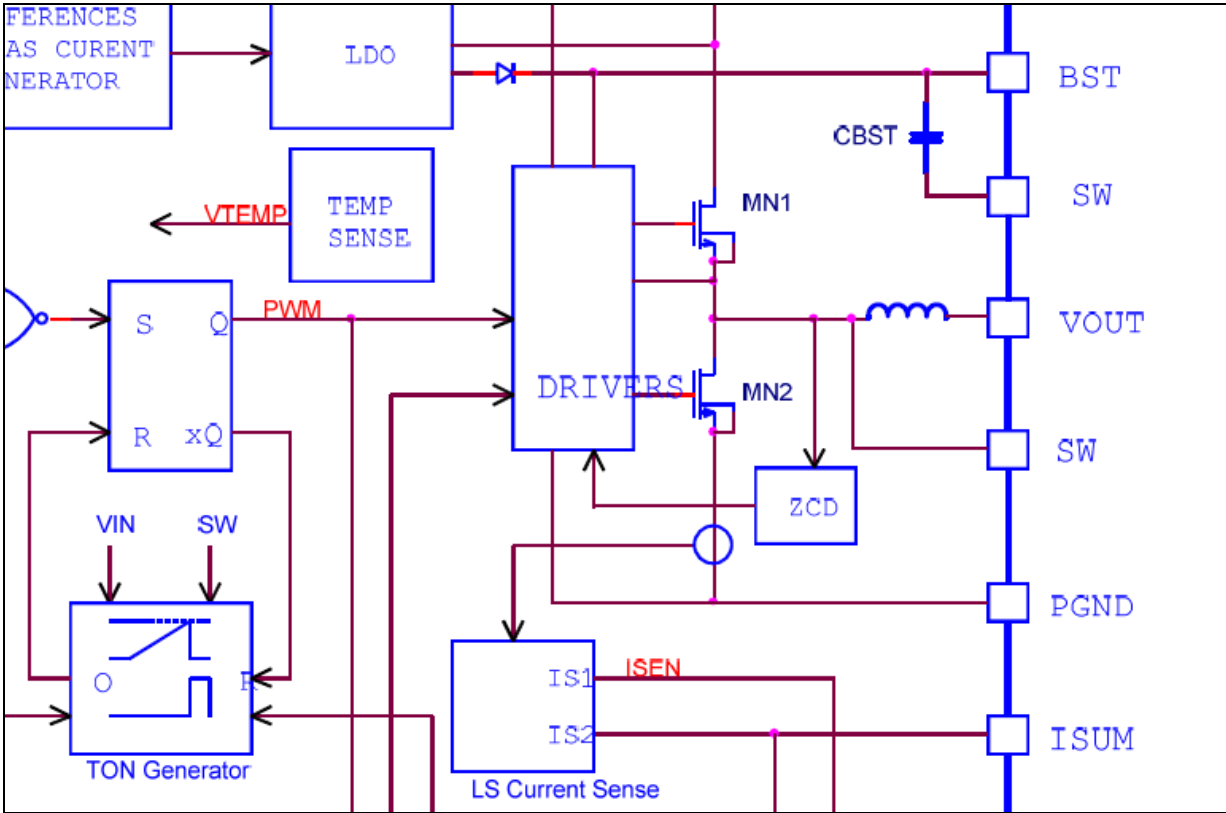
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
using said output-timing data to determine at least one timing parameter of said output.	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of using said output-timing data to determine at least one timing parameter of said output.</p> <p>The output-timing data received by the MPM3695 is used to determine a corresponding command for turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY). MPM3695-25 Data Sheet at 42.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

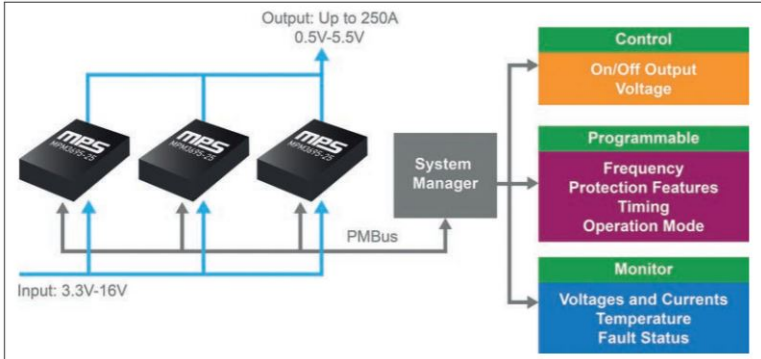
Claim Elements	Representative MPS Power Control Products ^{1,2}
<p>10. A method of determining at least one output-timing parameter of at least one point-of-load (“POL”) regulator comprising:</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform a method of determining at least one output-timing parameter of at least one point-of-load (“POL”) regulator.</p> <p>The MPM3695 power modules comprise point-of-load regulators that accept varied input voltages and generate varied output voltages to an attached load. <i>See, e.g.</i>, MPM3695-10 Data Sheet at 1; MPM3695-25 Data Sheet at 1; MPM3695-100 Data Sheet at 1.</p> <p>MPS touts the “scalability” and “programmability” of the power modules as significant features. MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at 2 (“Figure 5: MPM3695 Series Offers Scalability and Programmability”); <i>see also</i> https://www.monolithicpower.com/en/products/power-modules.html (last accessed June 11, 2021); Power Module Flyer at 1.</p> <p>The power modules, for instance, are programmed and controlled over a Power Management Bus (or PMBus):</p>  <p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5; <i>see also</i> MPM3695-10 Data Sheet at 1 (“The MPM3695-10 is a scalable, ultra-thin, fully integrated power module with a PMBus interface . . . [that] offers module configurability.”); MPM3695-25 Data Sheet at 1 (“The MPM3695-25 is a scalable, fully integrated power module with a PMBus interface . . .</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>[that] provides module configurations” with various parameters being “[p]rogrammable via PMBus.”); MPM3695-100 Data Sheet at 1 (“The MPM3695-100 is a 100A, scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations.”).</p> <p>The timing parameters of the MPM3695, for instance, are set over the PMBus. These programmable timing parameters include a turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), MPM3695-25 Data Sheet at 42, and a slew rate of an output voltage transition (via the MFR_VOUT_STEP command), MPM3695-25 Data Sheet at 50. Once set, these parameters are used to affect a desired output by the power module. MPM3695-25 Data Sheet at 8, 32-34.</p>
receiving output-timing data from a controller;	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of receiving output-timing data from a controller.</p> <p>As discussed above, the MPM3695 power modules are connected to a common power management data bus (PMBus), over which output-timing data commands is received.</p>

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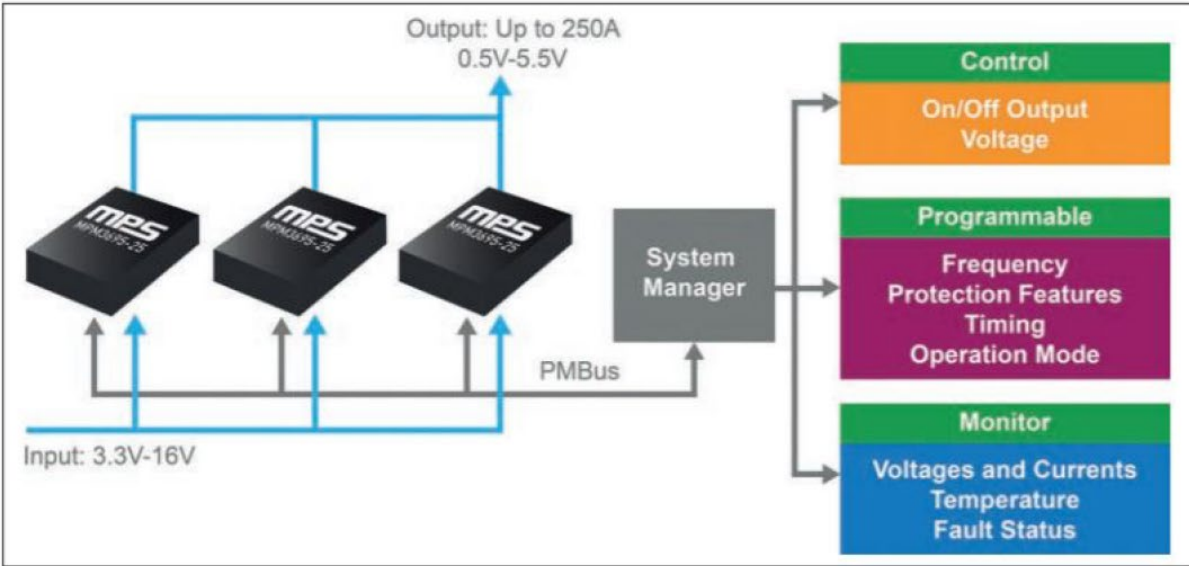
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p data-bbox="934 857 1648 886">Figure 5: MPM3695 Series Offers Scalability and Programmability</p> <p data-bbox="688 917 1713 951">Yang, Monolithic Power, <i>Intelligent Scalable DC-DC Power Modules</i>, at Fig. 5.</p> <p data-bbox="688 971 1913 1078">In particular, the controller transmits 1 to 2-byte commands for turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), or voltage transition slew rate (MFR_VOUT_STEP). MPM3695-25 Data Sheet at 42, 50.</p>
<p data-bbox="186 1122 638 1190">storing said output-timing data in a POL storage device;</p>	<p data-bbox="688 1122 1913 1229">The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of storing said output-timing data in a POL storage device.</p> <p data-bbox="688 1245 1913 1352">The output-timing data received from the PMBus are written to specific registers and/or non-volatile memory (e.g., Multiple Time Program or MTP cells). MPM3695-25 Data Sheet at 32-34, 36 (STORE_USER_ALL command).</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

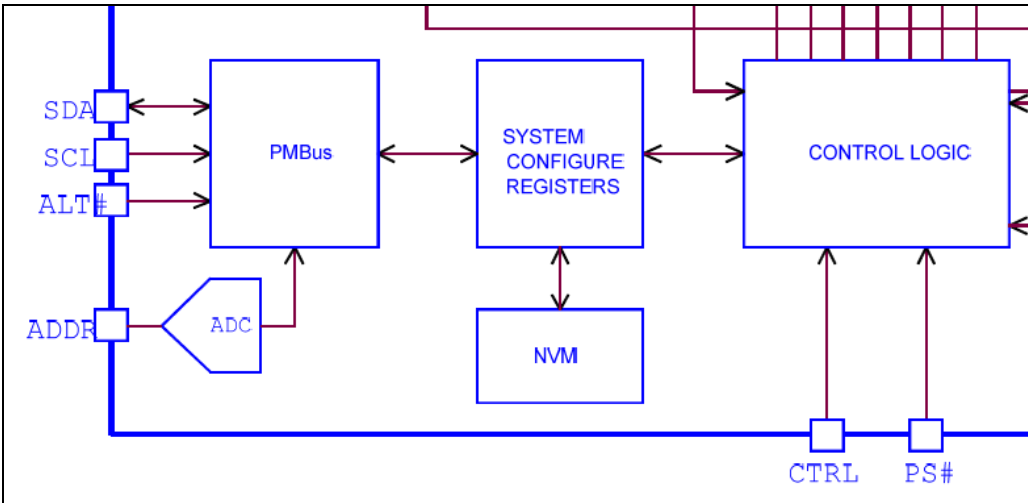
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>The diagram illustrates the internal architecture of MPS Power Control Products. It features a central PMBus block connected to SYSTEM CONFIGURE REGISTERS and CONTROL LOGIC. The PMBus is also connected to an ADC via an ADDE pin. The SYSTEM CONFIGURE REGISTERS are connected to NVM. The CONTROL LOGIC is connected to the PMBus and SYSTEM CONFIGURE REGISTERS. The CONTROL LOGIC also has a connection to a multi-pin bus at the top. The PMBus is connected to SDA, SCI, and ALT# pins. The CONTROL LOGIC is connected to CTRL and PS# pins. The ADC is connected to the PMBus via the ADDE pin.</p> <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
generating an output of said at least one POL regulator; and	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of generating an output of said at least one POL regulator.</p> <p>The MPM3695 power modules provide an output voltage to a connected load, with output voltage parameters being programmable via the PMBus. MPM3695 Data Sheet at 23.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

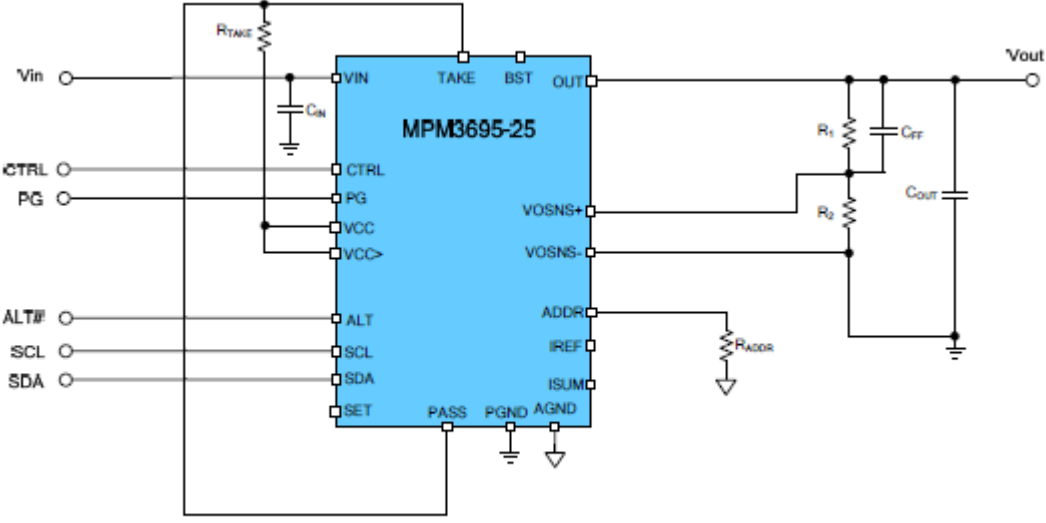
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p style="text-align: center;">Single Phase Operation</p> <p>MPM3695 Data Sheet at 2.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

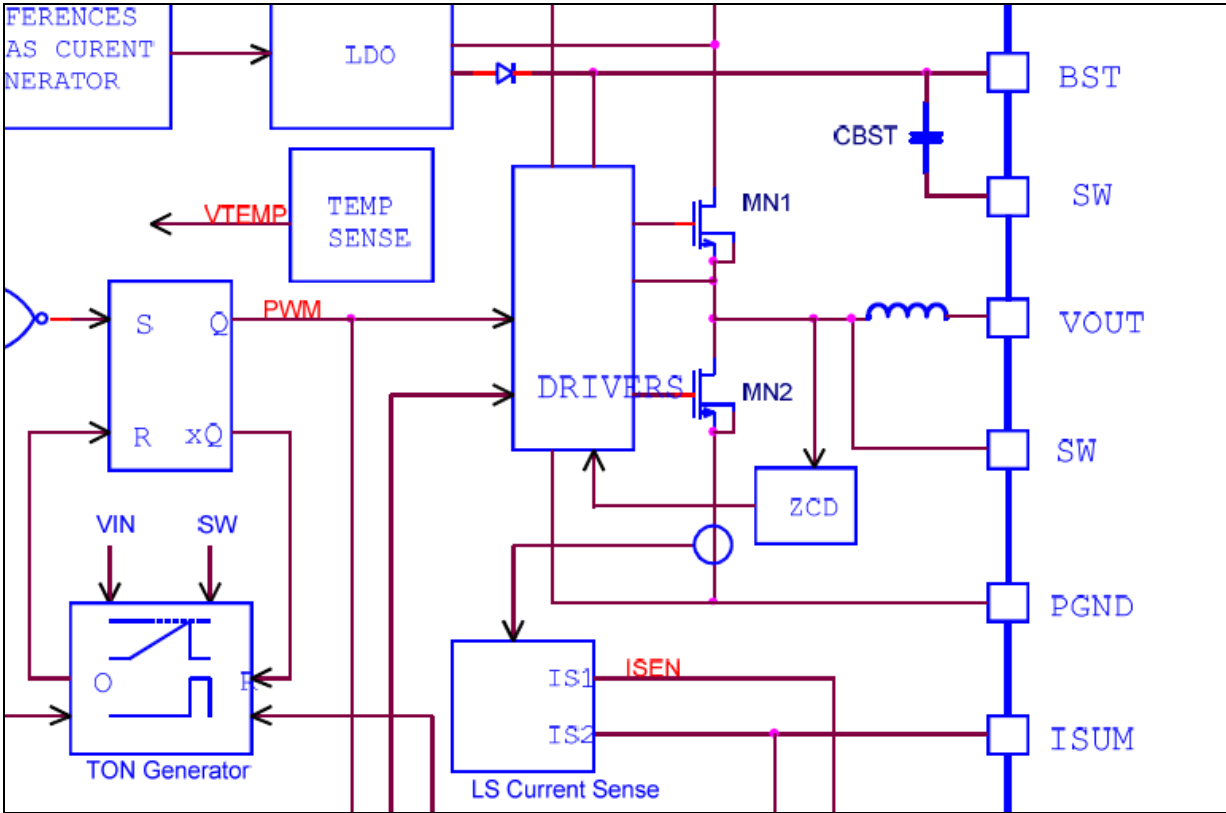
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
using said output-timing data to determine at least one timing parameter of said output;	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of using said output-timing data to determine at least one timing parameter of said output.</p> <p>The output-timing data received by the MPM3695 is used to determine a corresponding command for turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY). MPM3695-25 Data Sheet at 42.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Claim Elements	Representative MPS Power Control Products ^{1,2}
<p>wherein said step of receiving output-timing data further comprises receiving sequencing data and said step of using said output-timing data further comprises using said sequencing data to determine when said output should be generated.</p>	<p>As discussed above, the output-timing data received by the MPM3695 power modules is used to determine a corresponding command for turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), which constitute sequencing data. MPM3695-25 Data Sheet at 42. The values associated with the commands are then used to determine when the output should be generated.</p>
<p>11. A method of determining at least one output-timing parameter of at least one point-of-load (“POL”) regulator comprising:</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform a method of determining at least one output-timing parameter of at least one point-of-load (“POL”) regulator.</p> <p>The MPM3695 power modules comprise point-of-load regulators that accept varied input voltages and generate varied output voltages to an attached load. <i>See, e.g.,</i> MPM3695-10 Data Sheet at 1; MPM3695-25 Data Sheet at 1; MPM3695-100 Data Sheet at 1.</p> <p>MPS touts the “scalability” and “programmability” of the power modules as significant features. MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at 2 (“Figure 5: MPM3695 Series Offers Scalability and Programmability”); <i>see also</i> https://www.monolithicpower.com/en/products/power-modules.html (last accessed June 11, 2021); Power Module Flyer at 1.</p> <p>The power modules, for instance, are programmed and controlled over a Power Management Bus (or PMBus):</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

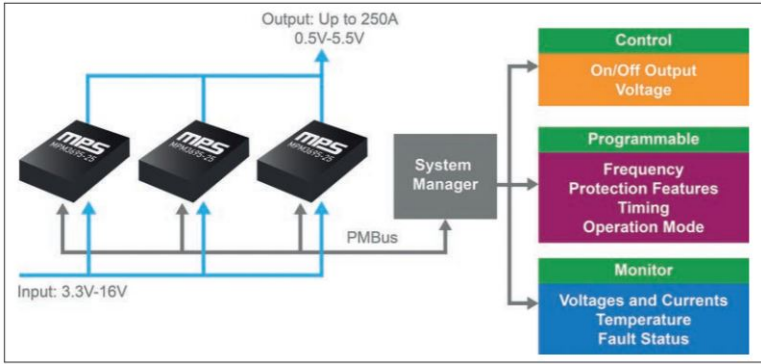
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5; <i>see also</i> MPM3695-10 Data Sheet at 1 (“The MPM3695-10 is a scalable, ultra-thin, fully integrated power module with a PMBus interface . . . [that] offers module configurability.”); MPM3695-25 Data Sheet at 1 (“The MPM3695-25 is a scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations” with various parameters being “[p]rogrammable via PMBus.”); MPM3695-100 Data Sheet at 1 (“The MPM3695-100 is a 100A, scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations.”).</p> <p>The timing parameters of the MPM3695, for instance, are set over the PMBus. These programmable timing parameters include a turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), MPM3695-25 Data Sheet at 42, and a slew rate of an output voltage transition (via the MFR_VOUT_STEP command), MPM3695-25 Data Sheet at 50. Once set, these parameters are used to affect a desired output by the power module. MPM3695-25 Data Sheet at 8, 32-34.</p>
receiving output-timing data from a controller;	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of receiving output-timing data from a controller.</p> <p>As discussed above, the MPM3695 power modules are connected to a common power</p>

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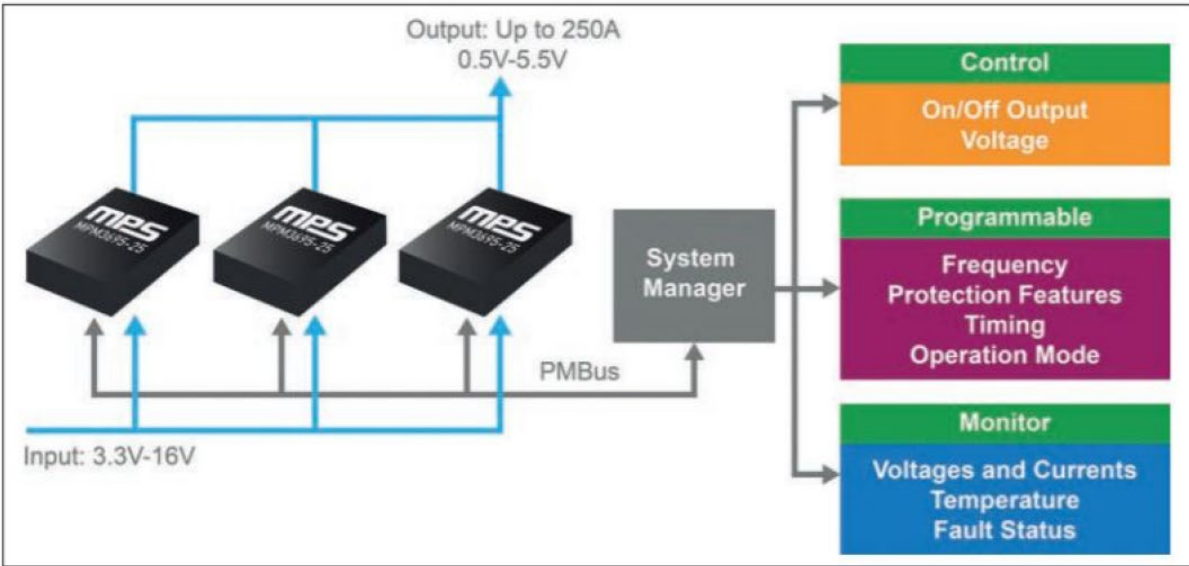
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>management data bus (PMBus), over which output-timing data commands is received.</p>  <p>Figure 5: MPM3695 Series Offers Scalability and Programmability</p> <p>Yang, Monolithic Power, <i>Intelligent Scalable DC-DC Power Modules</i>, at Fig. 5.</p> <p>In particular, the controller transmits 1 to 2-byte commands for turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), or voltage transition slew rate (MFR_VOUT_STEP). MPM3695-25 Data Sheet at 42, 50.</p>
<p>storing said output-timing data in a POL storage device;</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of storing said output-timing data in a POL storage device.</p> <p>The output-timing data received from the PMBus are written to specific registers and/or non-volatile memory (e.g., Multiple Time Program or MTP cells). MPM3695-25 Data Sheet at 32-</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

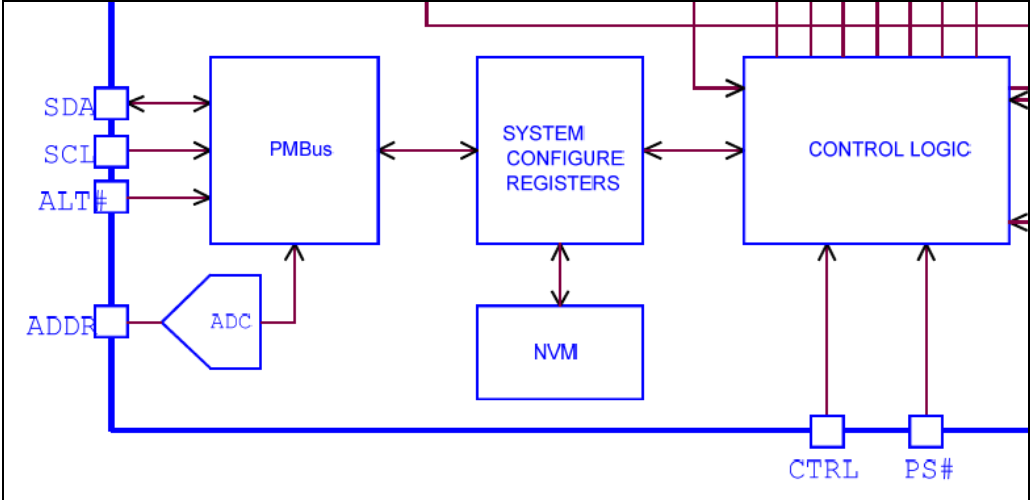
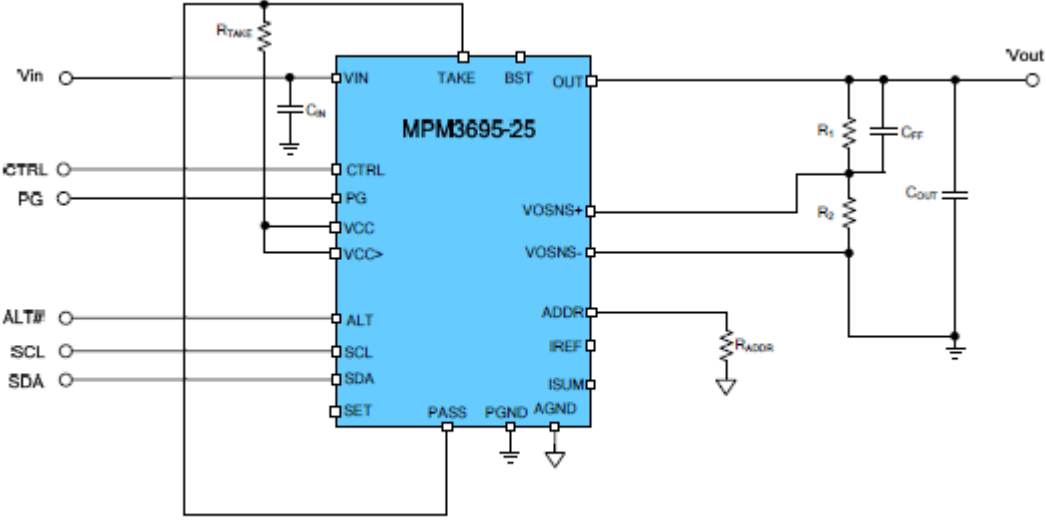
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>34, 36 (STORE_USER_ALL command).</p>  <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
generating an output of said at least one POL regulator; and	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of generating an output of said at least one POL regulator.</p> <p>The MPM3695 power modules provide an output voltage to a connected load, with output voltage parameters being programmable via the PMBus. MPM3695 Data Sheet at 23.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p data-bbox="1050 820 1396 852">Single Phase Operation</p> <p data-bbox="688 885 1039 917">MPM3695 Data Sheet at 2.</p>

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Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Claim Elements	Representative MPS Power Control Products ^{1,2}
<p>wherein said step of receiving output-timing data further comprises receiving slew-rate data and said step of using said output-timing data further comprises using said slew-rate data to determine the slew rate of said output.</p>	<p>As discussed above, slew-rate data received by the MPM3695 is used to determine a corresponding command for voltage transition slew rate (MFR_VOUT_STEP). MPM3695-25 Data Sheet at 50. The values associated with the commands are then used to determine the slew-rate of the output.</p>
<p>12. A method of determining at least one output-timing parameter of at least one point-of-load (“POL”) regulator comprising:</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform a method of determining at least one output-timing parameter of at least one point-of-load (“POL”) regulator.</p> <p>The MPM3695 power modules comprise point-of-load regulators that accept varied input voltages and generate varied output voltages to an attached load. <i>See, e.g.,</i> MPM3695-10 Data Sheet at 1; MPM3695-25 Data Sheet at 1; MPM3695-100 Data Sheet at 1.</p> <p>MPS touts the “scalability” and “programmability” of the power modules as significant features. MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at 2 (“Figure 5: MPM3695 Series Offers Scalability and Programmability”); <i>see also</i> https://www.monolithicpower.com/en/products/power-modules.html (last accessed June 11, 2021); Power Module Flyer at 1.</p> <p>The power modules, for instance, are programmed and controlled over a Power Management Bus (or PMBus):</p>

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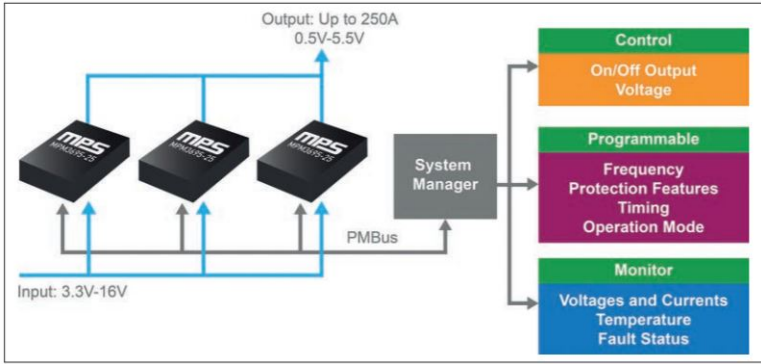
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>The diagram illustrates the architecture of MPS power control products. On the left, three MPS modules (labeled MPS MPM3695-10, MPS MPM3695-25, and MPS MPM3695-100) are shown. They are connected to a common input line labeled 'Input: 3.3V-16V'. Each module has an output line that connects to a common output line labeled 'Output: Up to 250A 0.5V-5.5V'. A 'PMBus' line runs horizontally between the modules and a 'System Manager' block. The 'System Manager' block is connected to three functional blocks: 'Control' (orange), 'Programmable' (green), and 'Monitor' (blue). The 'Control' block contains 'On/Off Output Voltage'. The 'Programmable' block contains 'Frequency Protection Features', 'Timing', and 'Operation Mode'. The 'Monitor' block contains 'Voltages and Currents', 'Temperature', and 'Fault Status'.</p> <p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5; <i>see also</i> MPM3695-10 Data Sheet at 1 (“The MPM3695-10 is a scalable, ultra-thin, fully integrated power module with a PMBus interface . . . [that] offers module configurability.”); MPM3695-25 Data Sheet at 1 (“The MPM3695-25 is a scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations” with various parameters being “[p]rogrammable via PMBus.”); MPM3695-100 Data Sheet at 1 (“The MPM3695-100 is a 100A, scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations.”).</p> <p>The timing parameters of the MPM3695, for instance, are set over the PMBus. These programmable timing parameters include a turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), MPM3695-25 Data Sheet at 42, and a slew rate of an output voltage transition (via the MFR_VOUT_STEP command), MPM3695-25 Data Sheet at 50. Once set, these parameters are used to affect a desired output by the power module. MPM3695-25 Data Sheet at 8, 32-34.</p>
receiving output-timing data from a controller;	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of receiving output-timing data from a controller.</p> <p>As discussed above, the MPM3695 power modules are connected to a common power</p>

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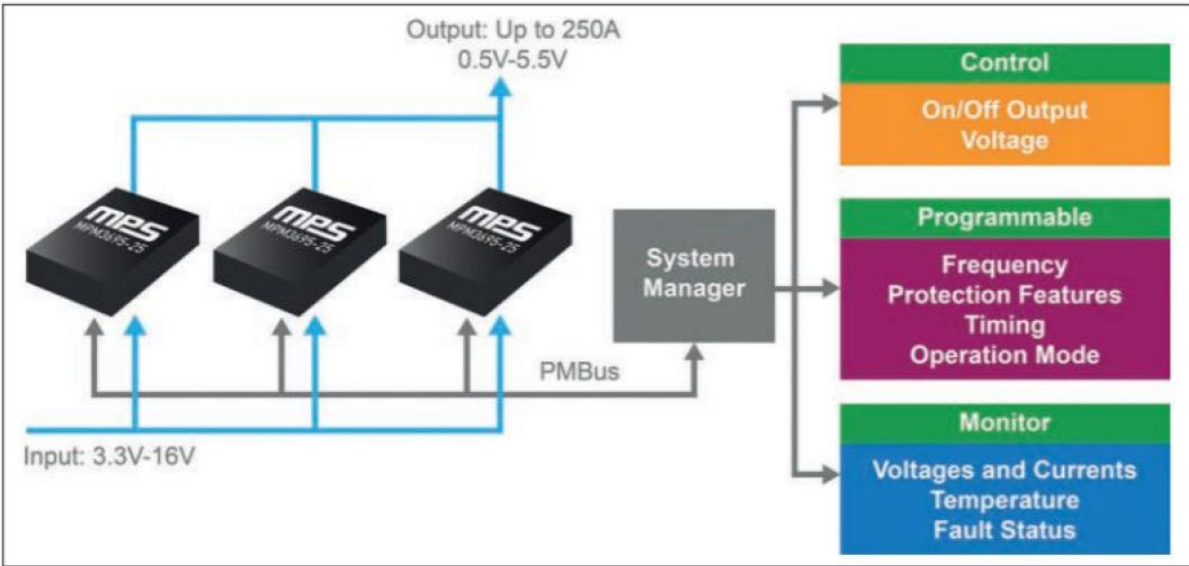
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>management data bus (PMBus), over which output-timing data commands is received.</p>  <p>Figure 5: MPM3695 Series Offers Scalability and Programmability</p> <p>Yang, Monolithic Power, <i>Intelligent Scalable DC-DC Power Modules</i>, at Fig. 5.</p> <p>In particular, the controller transmits 1 to 2-byte commands for turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), or voltage transition slew rate (MFR_VOUT_STEP). MPM3695-25 Data Sheet at 42, 50.</p>
storing said output-timing data in a POL storage device;	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of storing said output-timing data in a POL storage device.</p> <p>The output-timing data received from the PMBus are written to specific registers and/or non-volatile memory (e.g., Multiple Time Program or MTP cells). MPM3695-25 Data Sheet at 32-</p>

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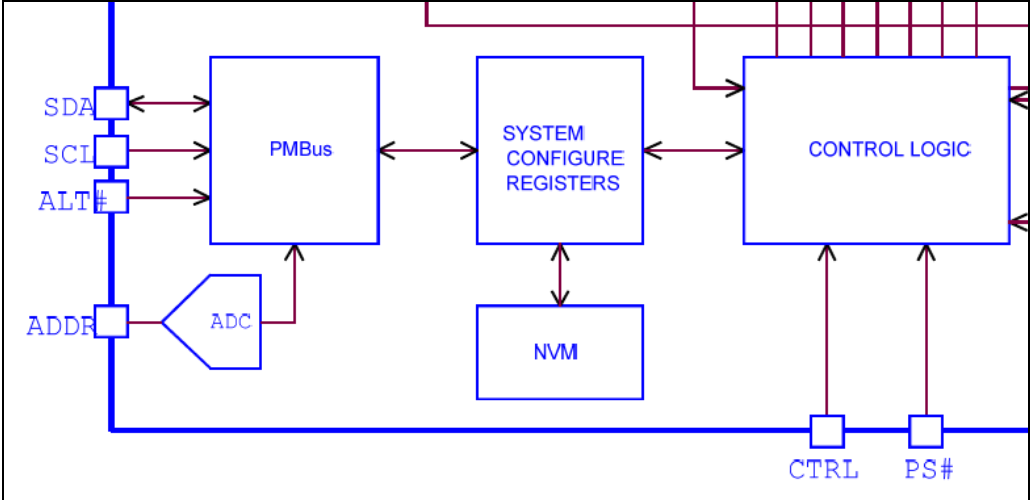
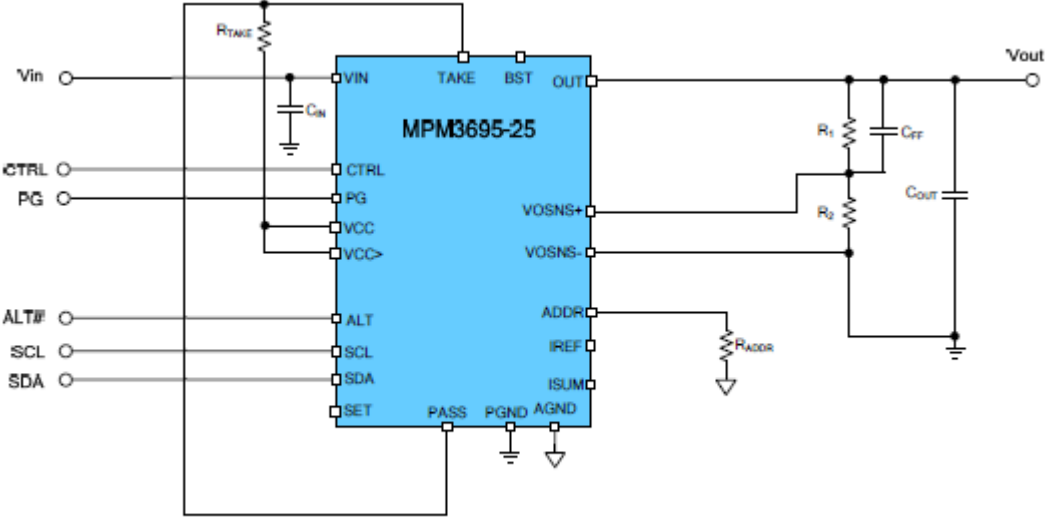
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>34, 36 (STORE_USER_ALL command).</p>  <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
generating an output of said at least one POL regulator; and	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of generating an output of said at least one POL regulator.</p> <p>The MPM3695 power modules provide an output voltage to a connected load, with output voltage parameters being programmable via the PMBus. MPM3695 Data Sheet at 23.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p style="text-align: center;">Single Phase Operation</p> <p>MPM3695 Data Sheet at 2.</p>

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Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Claim Elements	Representative MPS Power Control Products ^{1,2}
<p>wherein said step of receiving output-timing data further comprises receiving turn-off data and said step of using said output-timing data further comprises using said turn-off data to calculate a turn-off delay period corresponding to when said output is to be turned off.</p>	<p>As discussed above, the output-timing data received by the MPM3695 is used to determine a corresponding command for turn-off delay (TOFF_DELAY). MPM3695-25 Data Sheet at 42. The values associated with the commands are then used to calculate a turn-off delay period corresponding to when said output is to be turned off.</p>
<p>13. A method of determining at least one output-timing parameter of at least one point-of-load (“POL”) regulator comprising:</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform a method of determining at least one output-timing parameter of at least one point-of-load (“POL”) regulator.</p> <p>The MPM3695 power modules comprise point-of-load regulators that accept varied input voltages and generate varied output voltages to an attached load. <i>See, e.g.</i>, MPM3695-10 Data Sheet at 1; MPM3695-25 Data Sheet at 1; MPM3695-100 Data Sheet at 1.</p> <p>MPS touts the “scalability” and “programmability” of the power modules as significant features. MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at 2 (“Figure 5: MPM3695 Series Offers Scalability and Programmability”); <i>see also</i> https://www.monolithicpower.com/en/products/power-modules.html (last accessed June 11, 2021); Power Module Flyer at 1.</p> <p>The power modules, for instance, are programmed and controlled over a Power Management Bus (or PMBus):</p>

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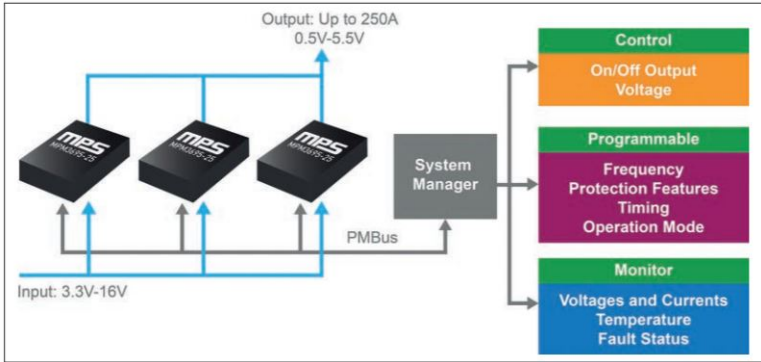
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5; <i>see also</i> MPM3695-10 Data Sheet at 1 (“The MPM3695-10 is a scalable, ultra-thin, fully integrated power module with a PMBus interface . . . [that] offers module configurability.”); MPM3695-25 Data Sheet at 1 (“The MPM3695-25 is a scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations” with various parameters being “[p]rogrammable via PMBus.”); MPM3695-100 Data Sheet at 1 (“The MPM3695-100 is a 100A, scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations.”).</p> <p>The timing parameters of the MPM3695, for instance, are set over the PMBus. These programmable timing parameters include a turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), MPM3695-25 Data Sheet at 42, and a slew rate of an output voltage transition (via the MFR_VOUT_STEP command), MPM3695-25 Data Sheet at 50. Once set, these parameters are used to affect a desired output by the power module. MPM3695-25 Data Sheet at 8, 32-34.</p>
receiving output-timing data from a controller;	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of receiving output-timing data from a controller.</p> <p>As discussed above, the MPM3695 power modules are connected to a common power</p>

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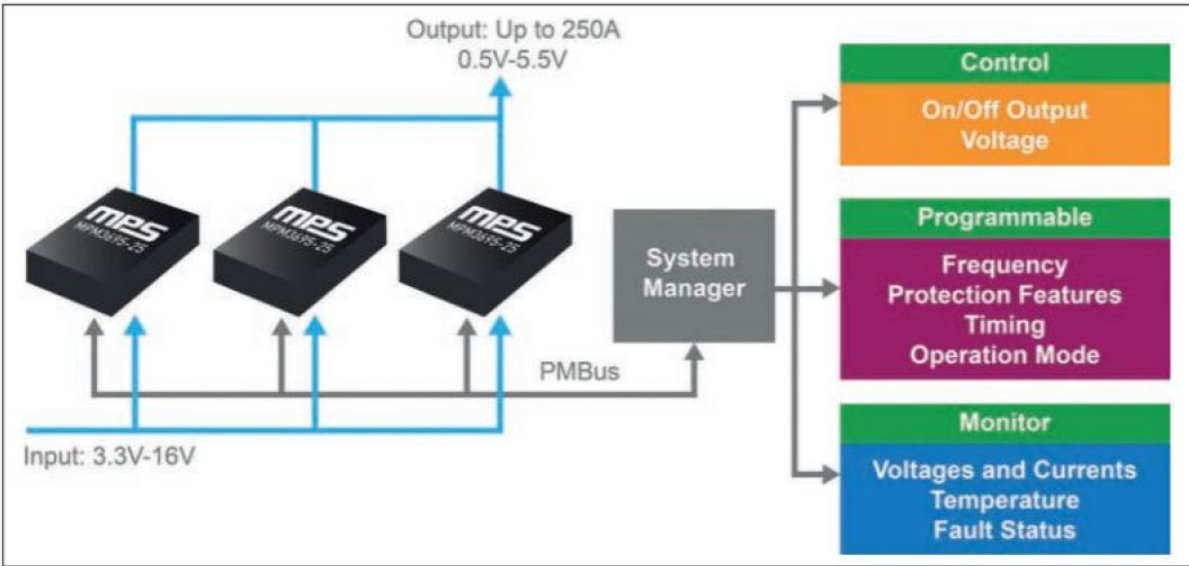
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>management data bus (PMBus), over which output-timing data commands is received.</p>  <p>Figure 5: MPM3695 Series Offers Scalability and Programmability</p> <p>Yang, Monolithic Power, <i>Intelligent Scalable DC-DC Power Modules</i>, at Fig. 5.</p> <p>In particular, the controller transmits 1 to 2-byte commands for turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), or voltage transition slew rate (MFR_VOUT_STEP). MPM3695-25 Data Sheet at 42, 50.</p>
storing said output-timing data in a POL storage device;	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of storing said output-timing data in a POL storage device.</p> <p>The output-timing data received from the PMBus are written to specific registers and/or non-volatile memory (e.g., Multiple Time Program or MTP cells). MPM3695-25 Data Sheet at 32-</p>

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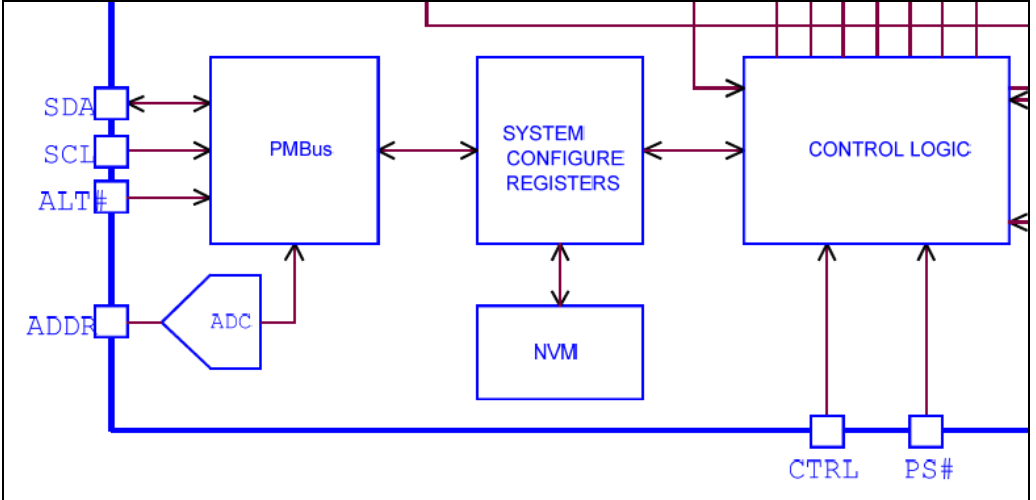
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>34, 36 (STORE_USER_ALL command).</p>  <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
generating an output of said at least one POL regulator; and	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of generating an output of said at least one POL regulator.</p> <p>The MPM3695 power modules provide an output voltage to a connected load, with output voltage parameters being programmable via the PMBus. MPM3695 Data Sheet at 23.</p>

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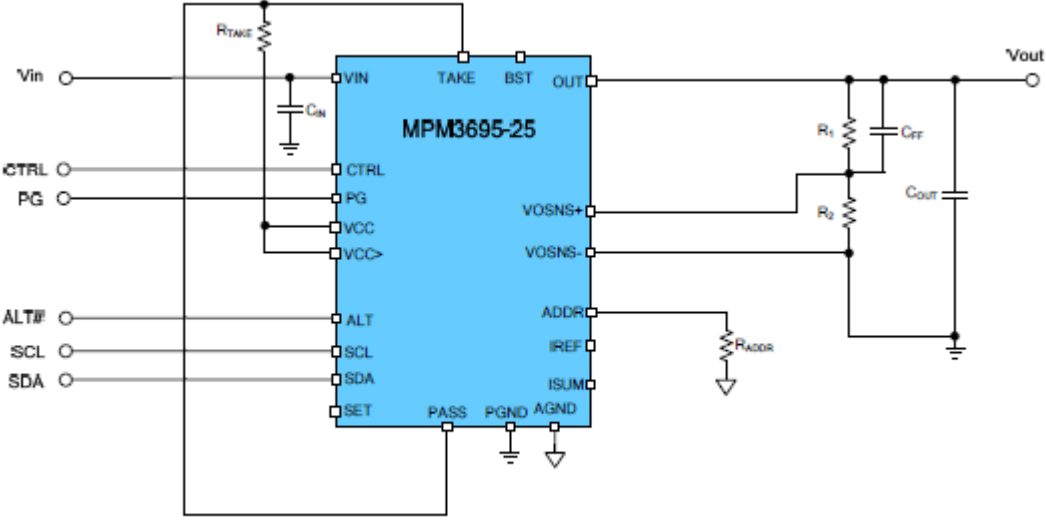
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p style="text-align: center;">Single Phase Operation</p> <p>MPM3695 Data Sheet at 2.</p>

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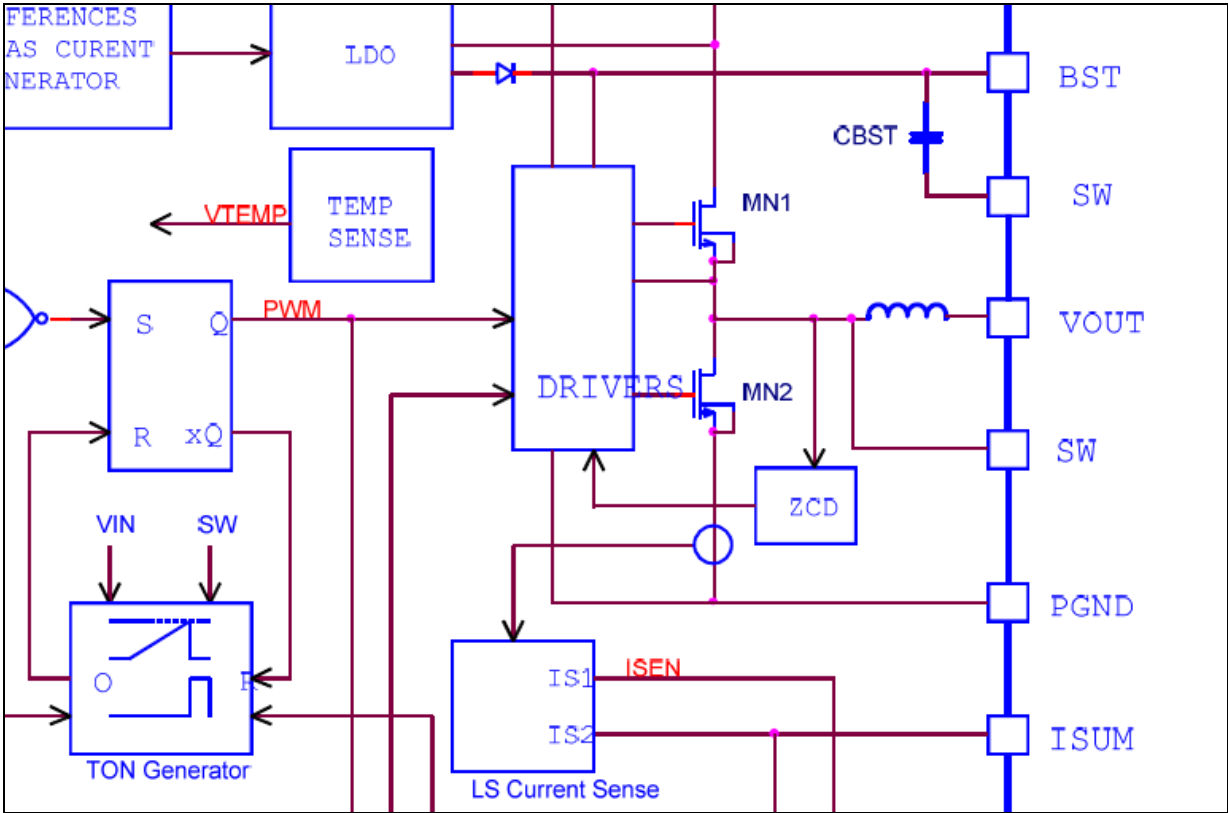
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
using said output-timing data to determine at least one timing parameter of said output;	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of using said output-timing data to determine at least one timing parameter of said output.</p> <p>The output-timing data received by the MPM3695 is used to determine a corresponding command for turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY). MPM3695-25 Data Sheet at 42.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Claim Elements	Representative MPS Power Control Products ^{1,2}
<p>wherein said step of receiving output-timing data further comprises receiving turn-on data and said step of using said output-timing data further comprises using said turn-on data to calculate a turn-on delay period corresponding to when said output should be generated.</p>	<p>As discussed above, the output-timing data received by the MPM3695 is used to determine a corresponding command for turn-on rise and delay (TON_RISE and TON_DELAY). MPM3695-25 Data Sheet at 42. The values associated with the commands are then used to calculate a turn-on delay period corresponding to when said output should be generated.</p>
<p>14. The method of claim 9, further comprising receiving enable data from said controller.</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of receiving enable data from said controller.</p> <p>The MPM3695, for example, is placed into operation based on an OPERATION and/or ON_OFF_CONFIG command received over the PMBus. MPM3695 Data Sheet at 35.</p>
<p>15. A method determining at least one output-timing parameter of at least one point-of-load (“POL”) regulator comprising:</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform a method of determining at least one output-timing parameter of at least one point-of-load (“POL”) regulator.</p> <p>The MPM3695 power modules comprise point-of-load regulators that accept varied input voltages and generate varied output voltages to an attached load. <i>See, e.g.</i>, MPM3695-10 Data Sheet at 1; MPM3695-25 Data Sheet at 1; MPM3695-100 Data Sheet at 1.</p> <p>MPS touts the “scalability” and “programmability” of the power modules as significant features. MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at 2 (“Figure 5: MPM3695 Series Offers Scalability and Programmability”); <i>see also</i> https://www.monolithicpower.com/en/products/power-modules.html (last accessed June 11, 2021); Power Module Flyer at 1.</p> <p>The power modules, for instance, are programmed and controlled over a Power Management Bus (or PMBus):</p>

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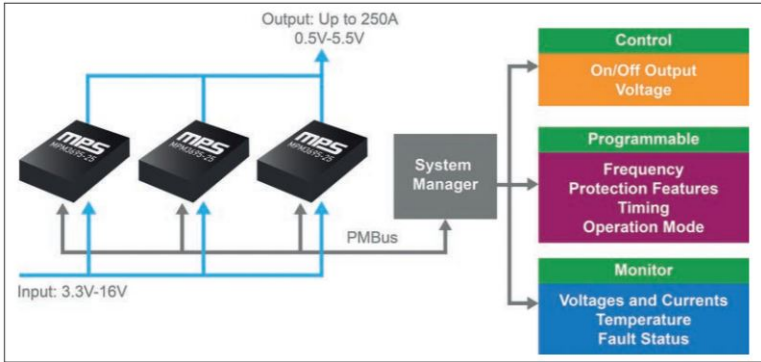
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5; <i>see also</i> MPM3695-10 Data Sheet at 1 (“The MPM3695-10 is a scalable, ultra-thin, fully integrated power module with a PMBus interface . . . [that] offers module configurability.”); MPM3695-25 Data Sheet at 1 (“The MPM3695-25 is a scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations” with various parameters being “[p]rogrammable via PMBus.”); MPM3695-100 Data Sheet at 1 (“The MPM3695-100 is a 100A, scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations.”).</p> <p>The timing parameters of the MPM3695, for instance, are set over the PMBus. These programmable timing parameters include a turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), MPM3695-25 Data Sheet at 42, and a slew rate of an output voltage transition (via the MFR_VOUT_STEP command), MPM3695-25 Data Sheet at 50. Once set, these parameters are used to affect a desired output by the power module. MPM3695-25 Data Sheet at 8, 32-34.</p>
receiving output-timing data from a controller;	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of receiving output-timing data from a controller.</p> <p>As discussed above, the MPM3695 power modules are connected to a common power</p>

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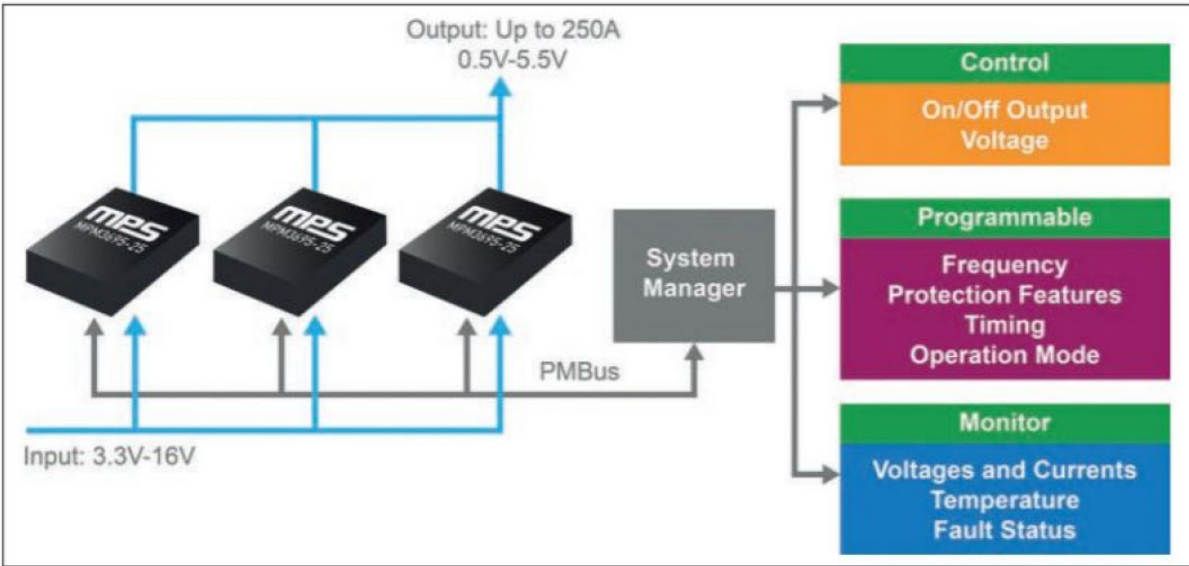
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>management data bus (PMBus), over which output-timing data commands is received.</p>  <p>Figure 5: MPM3695 Series Offers Scalability and Programmability</p> <p>Yang, Monolithic Power, <i>Intelligent Scalable DC-DC Power Modules</i>, at Fig. 5.</p> <p>In particular, the controller transmits 1 to 2-byte commands for turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), or voltage transition slew rate (MFR_VOUT_STEP). MPM3695-25 Data Sheet at 42, 50.</p>
storing said output-timing data in a POL storage device;	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of storing said output-timing data in a POL storage device.</p> <p>The output-timing data received from the PMBus are written to specific registers and moved into non-volatile memory (e.g., Multiple Time Program or MTP cells). MPM3695-25 Data</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

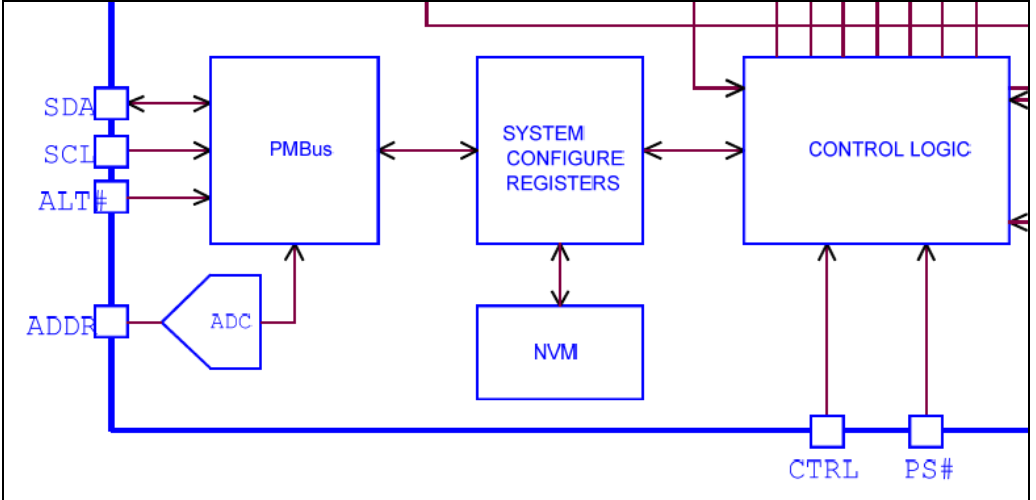
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>Sheet at 32-34, 36 (STORE_USER_ALL command).</p>  <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
generating an output of said at least one POL regulator;	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of generating an output of said at least one POL regulator.</p> <p>The MPM3695 power modules provide an output voltage to a connected load, with output voltage parameters being programmable via the PMBus. MPM3695 Data Sheet at 23.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

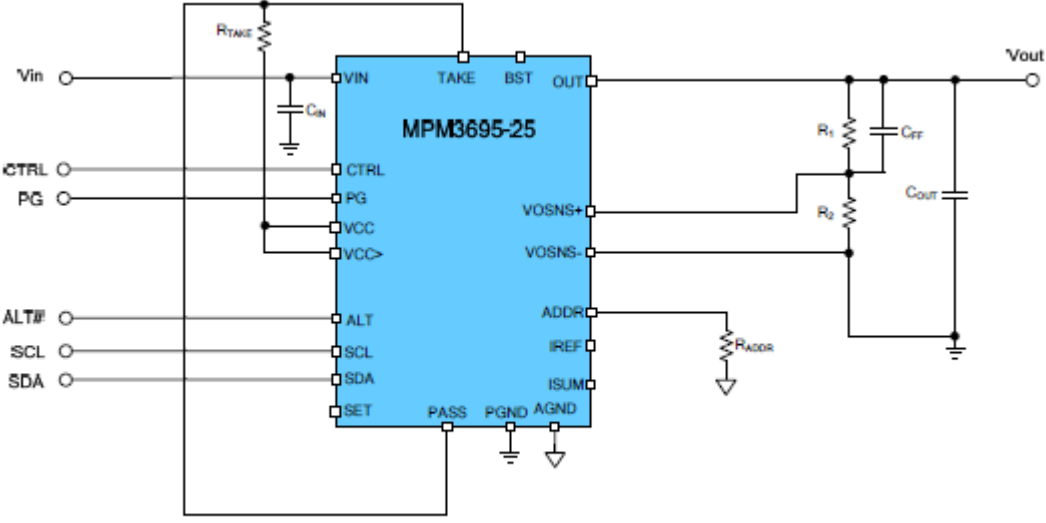
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p style="text-align: center;">Single Phase Operation</p> <p>MPM3695 Data Sheet at 2.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

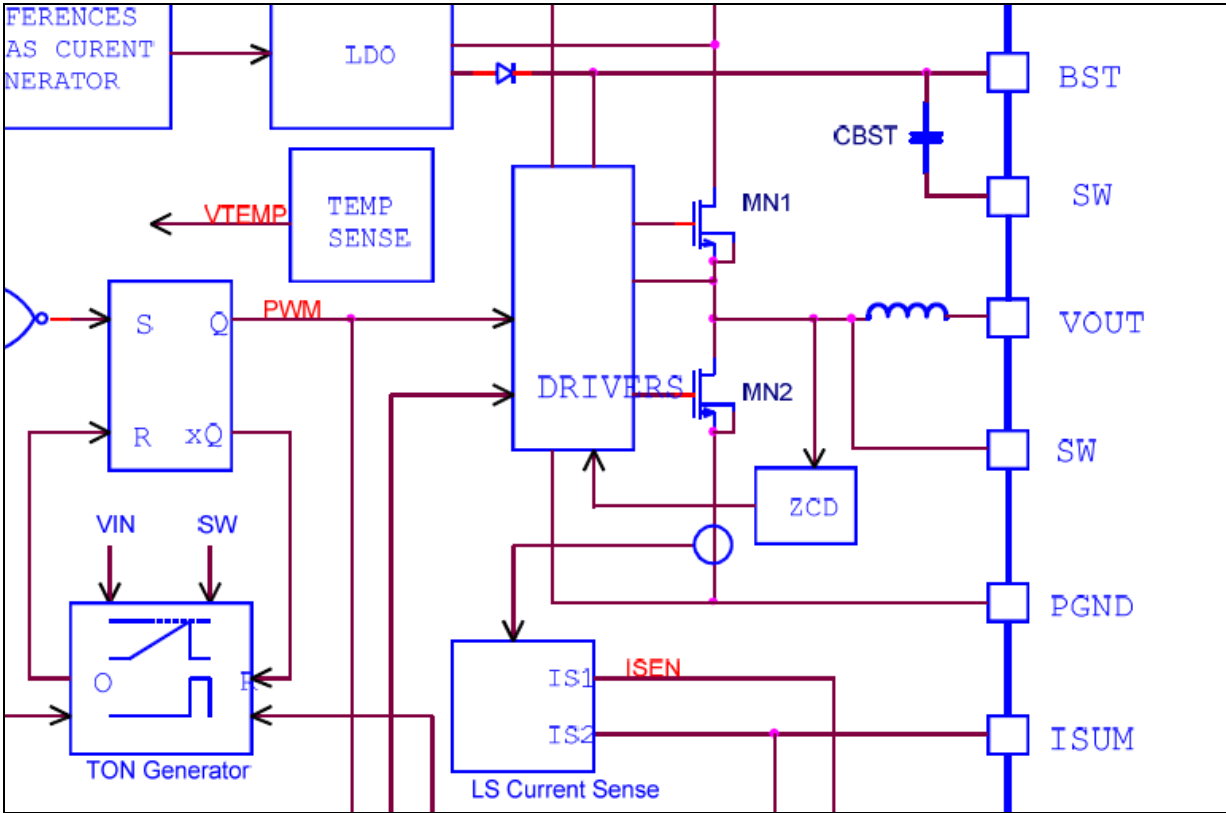
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
using said output-timing data to determine at least one timing parameter of said output; and	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of using said output-timing data to determine at least one timing parameter of said output.</p> <p>The output-timing data received by the MPM3695 is used to determine a corresponding command for turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY). MPM3695-25 Data Sheet at 42.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Claim Elements	Representative MPS Power Control Products ^{1,2}
receiving enable data from said controller;	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of receiving enable data from said controller.</p> <p>The MPM3695, for example, is placed into operation based on an OPERATION and/or ON_OFF_CONFIG command received over the PMBus. MPM3695 Data Sheet at 35.</p>
wherein said step of receiving output-timing data further comprises receiving sequencing data and said step of using said output-timing data further comprises using said sequencing data and said enable data to determine when said output should be generated.	<p>As discussed above, the output-timing data received by the MPM3695 is used to determine a corresponding command for turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), which constitute sequencing data. MPM3695-25 Data Sheet at 42. The values associated with the commands are then used to determine when the output should be generated.</p>
16. A method of determining at least one output timing parameter of at least one point-of-load (“POL”) regulator comprising:	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform a method of determining at least one output-timing parameter of at least one point-of-load (“POL”) regulator.</p> <p>The MPM3695 power modules comprise point-of-load regulators that accept varied input voltages and generate varied output voltages to an attached load. <i>See, e.g.</i>, MPM3695-10 Data Sheet at 1; MPM3695-25 Data Sheet at 1; MPM3695-100 Data Sheet at 1.</p> <p>MPS touts the “scalability” and “programmability” of the power modules as significant features. MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at 2 (“Figure 5: MPM3695 Series Offers Scalability and Programmability”); <i>see also</i> https://www.monolithicpower.com/en/products/power-modules.html (last accessed June 11, 2021); Power Module Flyer at 1.</p> <p>The power modules, for instance, are programmed and controlled over a Power Management</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p data-bbox="688 266 905 298">Bus (or PMBus):</p> <div data-bbox="919 337 1675 698"> <p>The diagram illustrates a system architecture for MPS power control products. On the left, three black rectangular modules are shown, each labeled 'mps' and 'MPM3695-10'. They are connected to a common input line labeled 'Input: 3.3V-16V'. Each module has an output line labeled 'Output: Up to 250A 0.5V-5.5V'. These modules are connected to a central 'System Manager' block via a 'PMBus' interface. The System Manager is further connected to a vertical stack of three colored boxes: a green box labeled 'Control' containing 'On/Off Output Voltage', a purple box labeled 'Programmable' containing 'Frequency', 'Protection Features', 'Timing', and 'Operation Mode', and a blue box labeled 'Monitor' containing 'Voltages and Currents', 'Temperature', and 'Fault Status'.</p> </div> <p data-bbox="688 740 1915 993">MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5; <i>see also</i> MPM3695-10 Data Sheet at 1 (“The MPM3695-10 is a scalable, ultra-thin, fully integrated power module with a PMBus interface . . . [that] offers module configurability.”); MPM3695-25 Data Sheet at 1 (“The MPM3695-25 is a scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations” with various parameters being “[p]rogrammable via PMBus.”); MPM3695-100 Data Sheet at 1 (“The MPM3695-100 is a 100A, scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations.”).</p> <p data-bbox="688 1052 1915 1266">The timing parameters of the MPM3695, for instance, are set over the PMBus. These programmable timing parameters include a turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), MPM3695-25 Data Sheet at 42, and a slew rate of an output voltage transition (via the MFR_VOUT_STEP command), MPM3695-25 Data Sheet at 50. Once set, these parameters are used to affect a desired output by the power module. MPM3695-25 Data Sheet at 8, 32-34.</p>
receiving slew-rate data from a controller;	The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of receiving slew-rate data

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

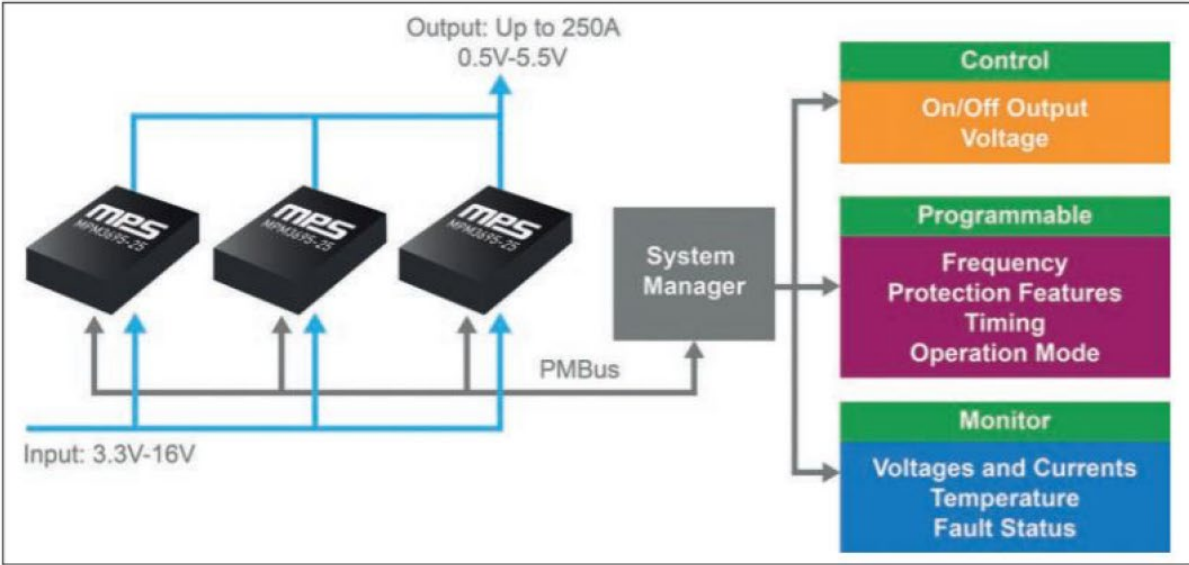
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>from a controller.</p> <p>As discussed above, the MPM3695 is connected to a common power management data bus (PMBus), over which output-timing data commands are received.</p>  <p>Figure 5: MPM3695 Series Offers Scalability and Programmability</p> <p>Yang, Monolithic Power, <i>Intelligent Scalable DC-DC Power Modules</i>, at Fig. 5. In particular, the controller transmits a 1-byte command for voltage transition slew rate (MFR_VOUT_STEP). MPM3695-25 Data Sheet at 50.</p>
storing said slew-rate data in a POL storage device;	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of storing said slew-rate data in a POL storage device.</p> <p>The slew-rate data received from the PMBus is written to specific registers and moved into non-volatile memory (<i>e.g.</i>, Multiple Time Program or MTP cells). MPM3695-25 Data Sheet at</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

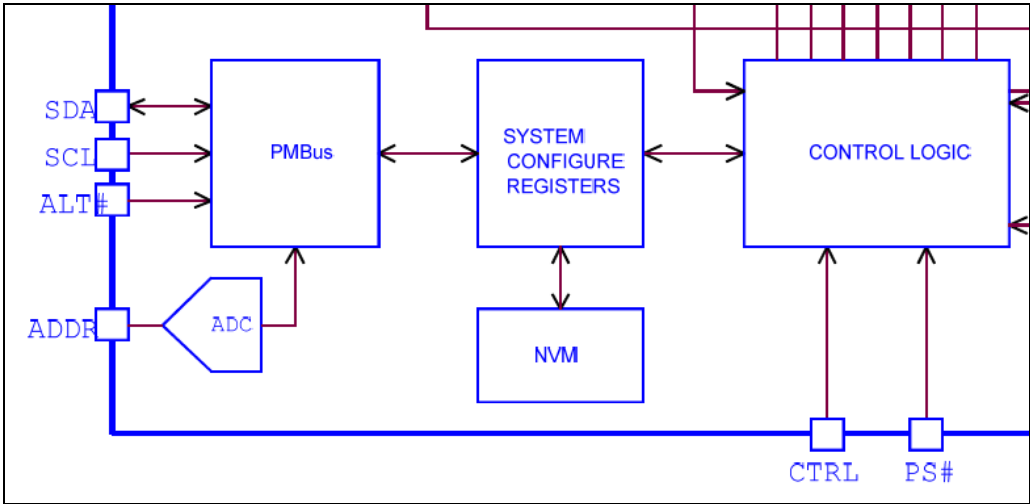
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>36, 50 (STORE_USER_ALL command).</p>  <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
receiving enable data from said controller; and	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of receiving enable data from said controller.</p> <p>The MPM3695, for example, is placed into operation based on an OPERATION and/or ON_OFF_CONFIG command received over the PMBus. MPM3695 Data Sheet at 35.</p>
using said slew-rate data to determine the slew-rate of an output of said at least one POL regulator.	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of using said slew-rate data to determine the slew-rate of an output of said at least one POL regulator.</p> <p>The output-timing data received by the MPM3695 is used to determine a corresponding command for voltage transition slew rate (MFR_VOUT_STEP). MPM3695-25 Data Sheet at 50. The values associated with the commands are then used to determine the slew-rate of an</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

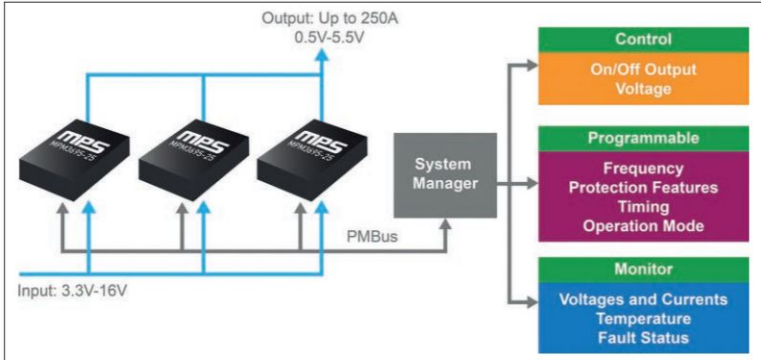
Claim Elements	Representative MPS Power Control Products ^{1,2}
<p>17. A method of determining at least one output timing parameter of at least one point-of-load (“POL”) regulator comprising:</p>	<p>output of said at least one POL regulator.</p> <p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform a method of determining at least one output-timing parameter of at least one point-of-load (“POL”) regulator.</p> <p>The MPM3695 power modules comprise point-of-load regulators that accept varied input voltages and generate varied output voltages to an attached load. <i>See, e.g.</i>, MPM3695-10 Data Sheet at 1; MPM3695-25 Data Sheet at 1; MPM3695-100 Data Sheet at 1.</p> <p>MPS touts the “scalability” and “programmability” of the power modules as significant features. MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at 2 (“Figure 5: MPM3695 Series Offers Scalability and Programmability”); <i>see also</i> https://www.monolithicpower.com/en/products/power-modules.html (last accessed June 11, 2021); Power Module Flyer at 1.</p> <p>The power modules, for instance, are programmed and controlled over a Power Management Bus (or PMBus):</p>  <p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5; <i>see also</i> MPM3695-10 Data Sheet at 1 (“The MPM3695-10 is a scalable, ultra-thin, fully integrated power module</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>with a PMBus interface . . . [that] offers module configurability.”); MPM3695-25 Data Sheet at 1 (“The MPM3695-25 is a scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations” with various parameters being “[p]rogrammable via PMBus.”); MPM3695-100 Data Sheet at 1 (“The MPM3695-100 is a 100A, scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations.”).</p> <p>The timing parameters of the MPM3695, for instance, are set over the PMBus. These programmable timing parameters include a turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), MPM3695-25 Data Sheet at 42, and a slew rate of an output voltage transition (via the MFR_VOUT_STEP command), MPM3695-25 Data Sheet at 50. Once set, these parameters are used to affect a desired output by the power module. MPM3695-25 Data Sheet at 8, 32-34.</p>
receiving slew-rate data from a controller;	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of receiving slew-rate data from a controller.</p> <p>As discussed above, the MPM3695 is connected to a common power management data bus (PMBus), over which output-timing data commands are received.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

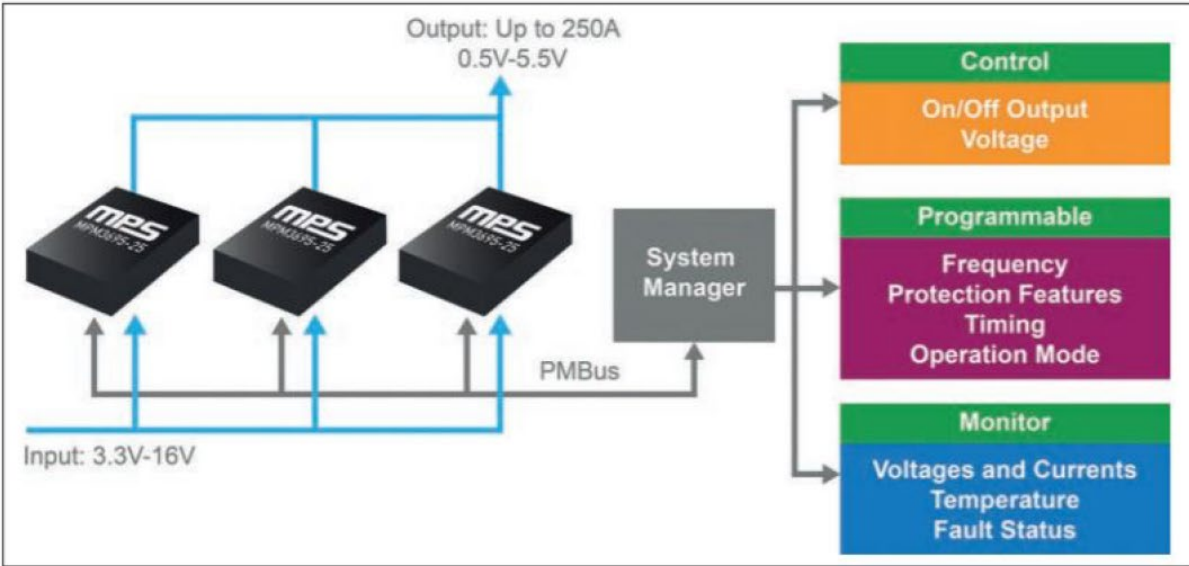
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p data-bbox="934 857 1648 885">Figure 5: MPM3695 Series Offers Scalability and Programmability</p> <p data-bbox="688 917 1915 1026">Yang, Monolithic Power, <i>Intelligent Scalable DC-DC Power Modules</i>, at Fig. 5. In particular, the controller transmits a 1-byte command for voltage transition slew rate (MFR_VOUT_STEP). MPM3695-25 Data Sheet at 50.</p>
storing said slew-rate data in a POL storage device;	<p data-bbox="688 1068 1915 1177">The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of storing said slew-rate data in a POL storage device.</p> <p data-bbox="688 1193 1915 1302">The slew-rate data received from the PMBus is written to specific registers and moved into non-volatile memory (e.g., Multiple Time Program or MTP cells). MPM3695-25 Data Sheet at 36, 50 (STORE_USER_ALL command).</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

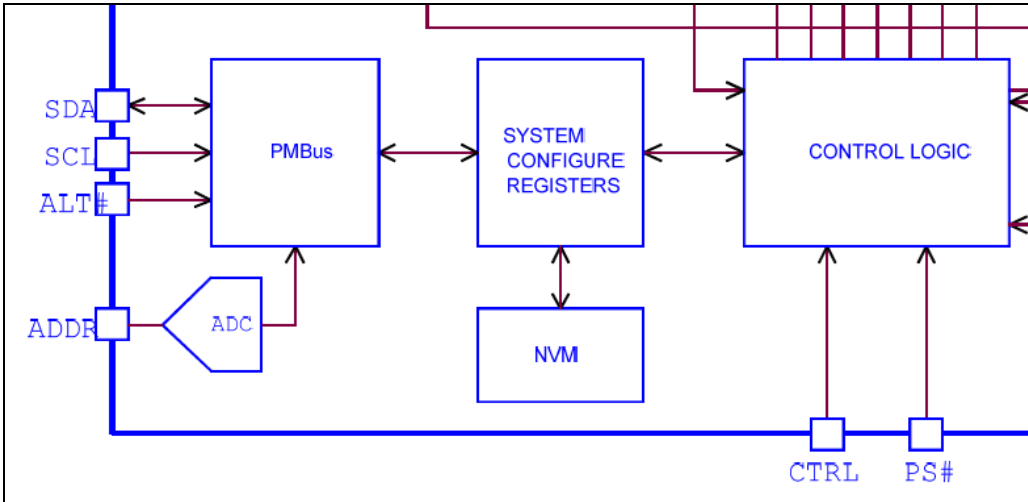
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
receiving enable data from said controller;	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of receiving enable data from said controller.</p> <p>The MPM3695, for example, is placed into operation based on an OPERATION and/or ON_OFF_CONFIG command received over the PMBus. MPM3695 Data Sheet at 35.</p>
using said slew-rate data to determine the slew-rate of an output of said at least one POL regulator;	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of using said slew-rate data to determine the slew-rate of an output of said at least one POL regulator.</p> <p>The output-timing data received by the MPM3695 is used to determine a corresponding command for voltage transition slew rate (MFR_VOUT_STEP). MPM3695-25 Data Sheet at 50. The values associated with the commands are then used to determine the slew-rate of an output of said at least one POL regulator.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

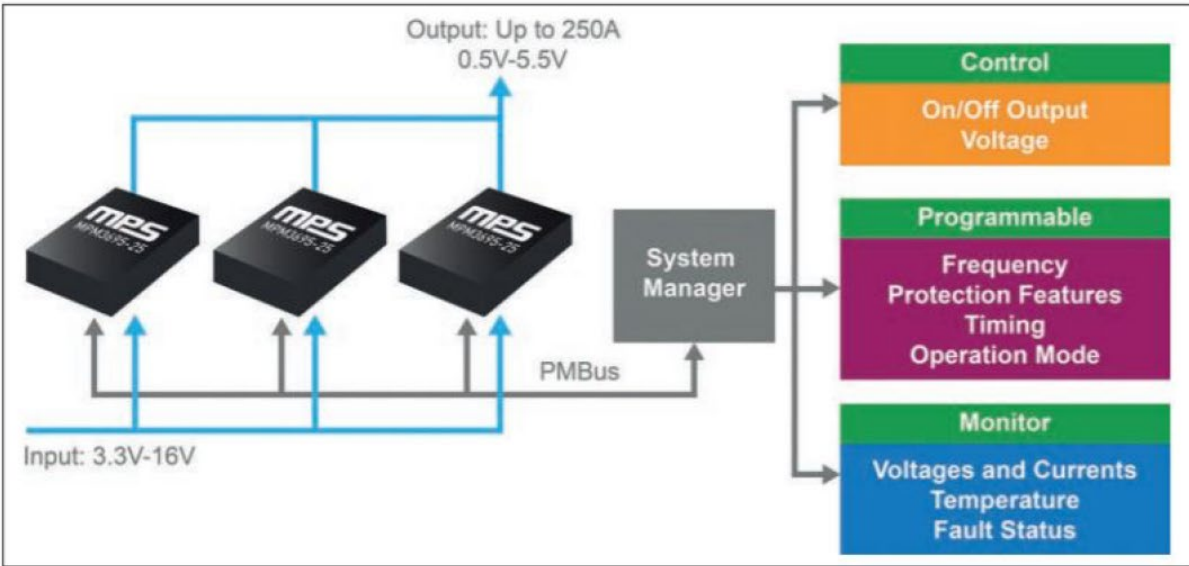
Claim Elements	Representative MPS Power Control Products ^{1,2}
<p>receiving sequencing data from said controller;</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of receiving sequencing data from said controller.</p> <p>As discussed above, the MPM3695 is connected to a common power management data bus (PMBus), over which commands are received.</p>  <p>Figure 5: MPM3695 Series Offers Scalability and Programmability</p> <p>Yang, Monolithic Power, <i>Intelligent Scalable DC-DC Power Modules</i>, at Fig. 5.</p> <p>In particular, the controller transmits 1 to 2-byte commands for turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), which would constitute sequencing data. MPM3695-25 Data Sheet at 42.</p>
<p>storing said sequencing data in said</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of storing said sequencing data</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

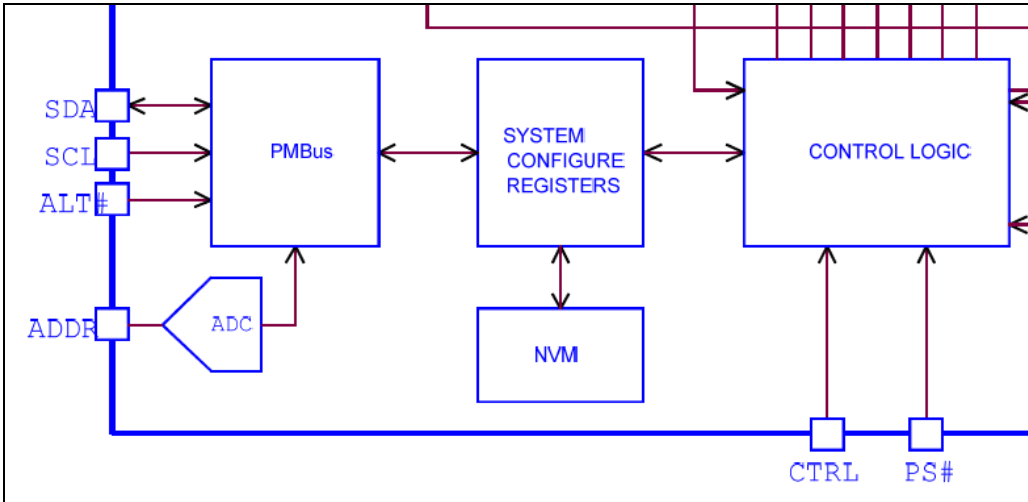
Claim Elements	Representative MPS Power Control Products ^{1,2}
POL storage device; and	<p>in said POL storage device.</p> <p>The sequencing data received from the PMBus are written to specific registers and moved into non-volatile memory (<i>e.g.</i>, Multiple Time Program or MTP cells). MPM3695-25 Data Sheet at 36, 50 (STORE_USER_ALL command).</p>  <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
using said sequencing data to determine when said output is to be produced.	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of using said sequencing data to determine when said output is to be produced.</p> <p>As discussed above, the sequencing data received by the MPM3695 is used to determine a corresponding command for turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY). MPM3695-25 Data Sheet at 42. The values associated with the commands are then used to determine when the output should be generated.</p>
18. The method of claim 17, wherein said step of using said sequencing	The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of using said sequencing data

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Claim Elements	Representative MPS Power Control Products ^{1,2}
<p>data to determine when said output is to be provided further comprises waiting a period of time after said enable data has been received before said output is produced, said period of time being determined by said sequencing data.</p>	<p>by waiting a period of time after said enable data has been received before said output is produced, said period of time being determined by said sequencing data.</p> <p>As discussed above, the sequencing data received by the MPM3695 is used to determine a corresponding command for turn-on delay (TON_DELAY) which specifies a waiting a period of time after a start condition is received until the output voltage starts to rise. MPM3695-25 Data Sheet at 42.</p>
<p>19. A method of determining at least one output timing parameter of at least one point-of-load (“POL”) regulator comprising:</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform a method of determining at least one output-timing parameter of at least one point-of-load (“POL”) regulator.</p> <p>The MPM3695 power modules comprise point-of-load regulators that accept varied input voltages and generate varied output voltages to an attached load. <i>See, e.g.</i>, MPM3695-10 Data Sheet at 1; MPM3695-25 Data Sheet at 1; MPM3695-100 Data Sheet at 1.</p> <p>MPS touts the “scalability” and “programmability” of the power modules as significant features. MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at 2 (“Figure 5: MPM3695 Series Offers Scalability and Programmability”); <i>see also</i> https://www.monolithicpower.com/en/products/power-modules.html (last accessed June 11, 2021); Power Module Flyer at 1.</p> <p>The power modules, for instance, are programmed and controlled over a Power Management Bus (or PMBus):</p>

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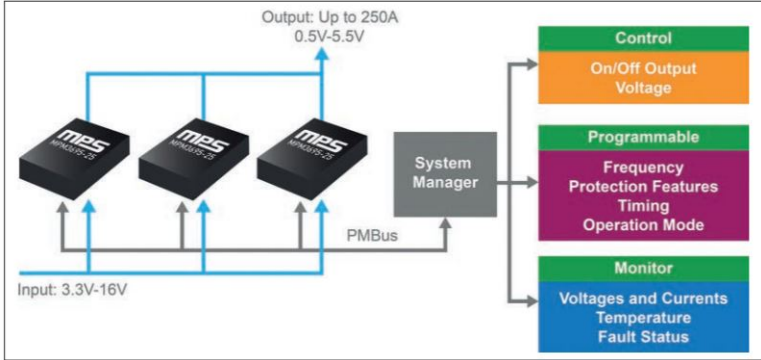
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5; <i>see also</i> MPM3695-10 Data Sheet at 1 (“The MPM3695-10 is a scalable, ultra-thin, fully integrated power module with a PMBus interface . . . [that] offers module configurability.”); MPM3695-25 Data Sheet at 1 (“The MPM3695-25 is a scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations” with various parameters being “[p]rogrammable via PMBus.”); MPM3695-100 Data Sheet at 1 (“The MPM3695-100 is a 100A, scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations.”).</p> <p>The timing parameters of the MPM3695, for instance, are set over the PMBus. These programmable timing parameters include a turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), MPM3695-25 Data Sheet at 42, and a slew rate of an output voltage transition (via the MFR_VOUT_STEP command), MPM3695-25 Data Sheet at 50. Once set, these parameters are used to affect a desired output by the power module. MPM3695-25 Data Sheet at 8, 32-34.</p>
receiving slew-rate data from a controller;	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of receiving slew-rate data from a controller.</p> <p>As discussed above, the MPM3695 is connected to a common power management data bus</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

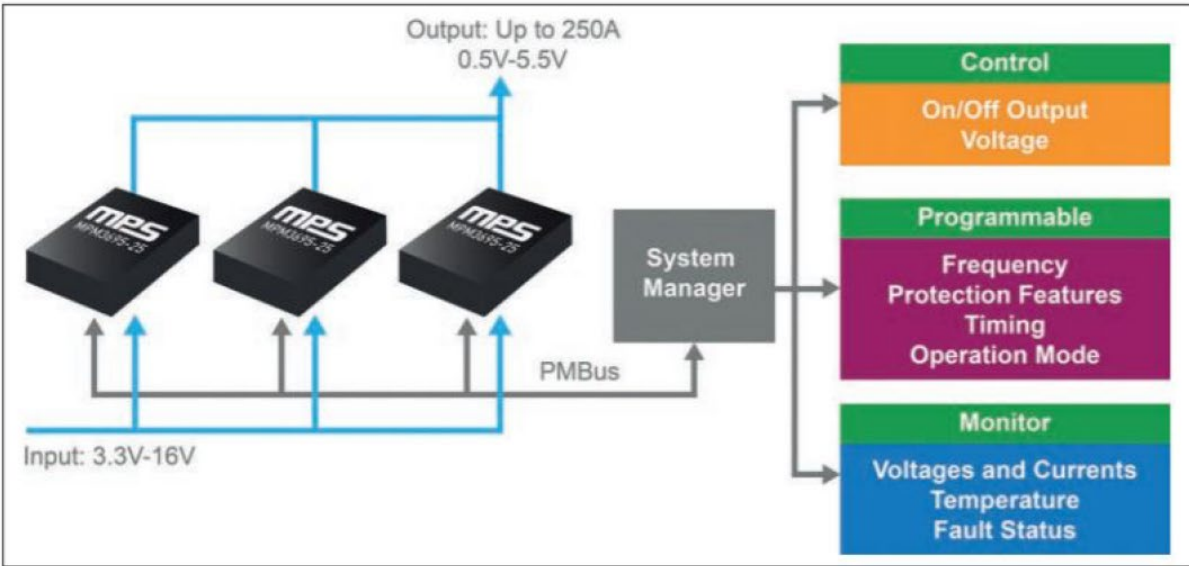
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>(PMBus), over which output-timing data commands are received.</p>  <p>Figure 5: MPM3695 Series Offers Scalability and Programmability</p> <p>Yang, Monolithic Power, <i>Intelligent Scalable DC-DC Power Modules</i>, at Fig. 5. In particular, the controller transmits a 1-byte command for voltage transition slew rate (MFR_VOUT_STEP). MPM3695-25 Data Sheet at 50.</p>
<p>storing said slew-rate data in a POL storage device;</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of storing said slew-rate data in a POL storage device.</p> <p>The slew-rate data received from the PMBus is written to specific registers and moved into non-volatile memory (e.g., Multiple Time Program or MTP cells). MPM3695-25 Data Sheet at 36, 50 (STORE_USER_ALL command).</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

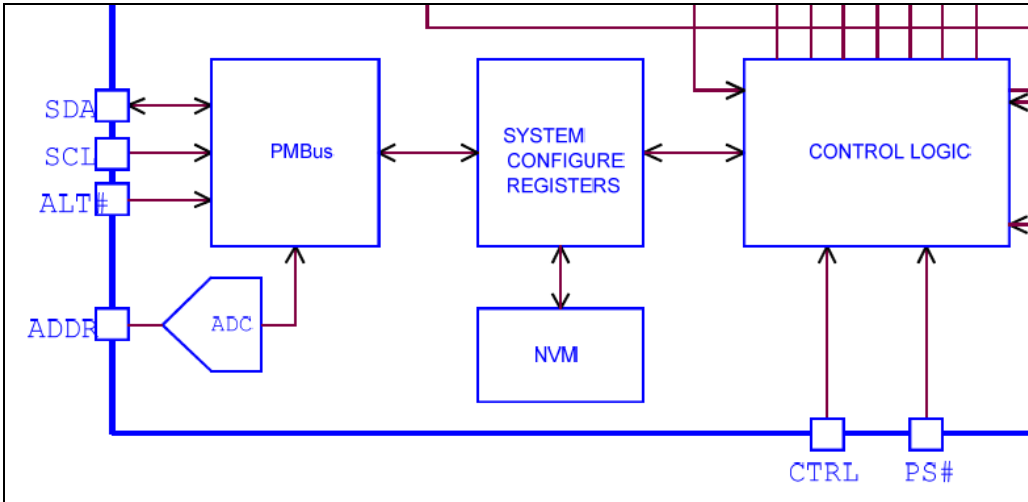
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>The diagram illustrates the internal architecture of MPS Power Control Products. It features a central PMBus interface connected to SDA, SCL, and ALT# pins. An ADC is connected to the PMBus via an ADDR pin. The PMBus is bidirectionally connected to SYSTEM CONFIGURE REGISTERS, which are in turn connected to CONTROL LOGIC. NVM (Non-Volatile Memory) is connected to the SYSTEM CONFIGURE REGISTERS. The CONTROL LOGIC is connected to CTRL and PS# pins. A multi-pin bus is also shown at the top of the CONTROL LOGIC block.</p> <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
receiving enable data from said controller;	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of receiving enable data from said controller.</p> <p>The MPM3695, for example, is placed into operation based on an OPERATION and/or ON_OFF_CONFIG command received over the PMBus. MPM3695 Data Sheet at 35.</p>
using said slew-rate data to determine the slew-rate of an output of said at least one POL regulator;	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of using said slew-rate data to determine the slew-rate of an output of said at least one POL regulator.</p> <p>The output-timing data received by the MPM3695 is used to determine a corresponding command for voltage transition slew rate (MFR_VOUT_STEP). MPM3695-25 Data Sheet at 50. The values associated with the commands are then used to determine the slew-rate of an output of said at least one POL regulator.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

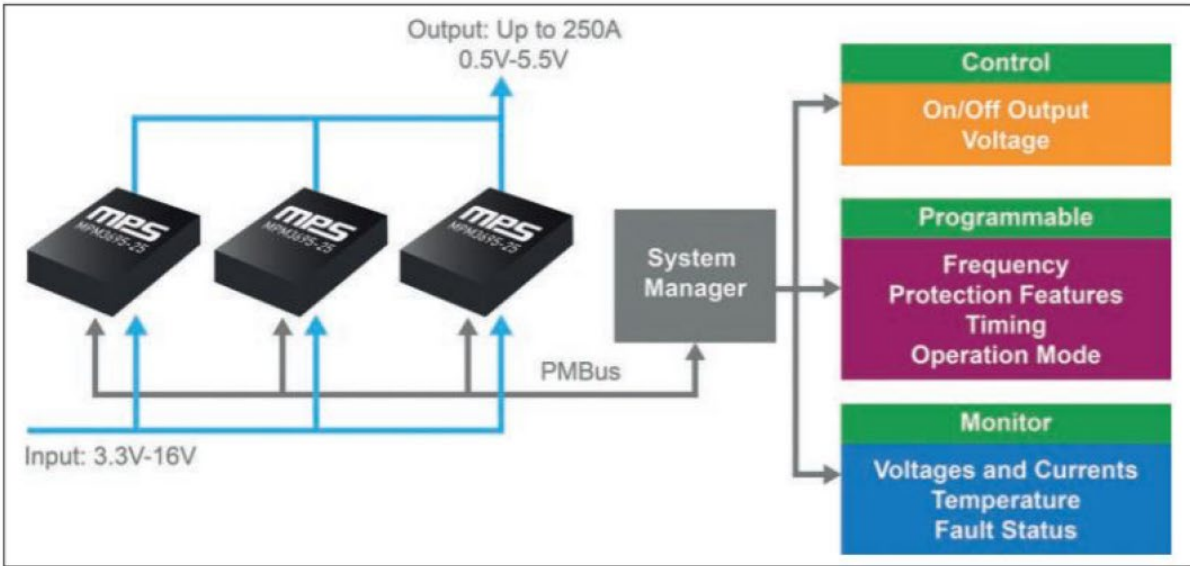
Claim Elements	Representative MPS Power Control Products ^{1,2}
<p>receiving turn-on data from said controller;</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of receiving sequencing data from said controller.</p> <p>As discussed above, the MPM3695 power modules are connected to a common power management data bus (PMBus), over which commands can be received.</p>  <p>Figure 5: MPM3695 Series Offers Scalability and Programmability</p> <p>Yang, Monolithic Power, <i>Intelligent Scalable DC-DC Power Modules</i>, at Fig. 5.</p> <p>In particular, the controller transmits 1 to 2-byte commands for turn-on rise/delay (TON_RISE, TON_DELAY). MPM3695-25 Data Sheet at 42.</p>
<p>storing said turn-on data in said POL storage device; and</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of storing said sequencing data</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

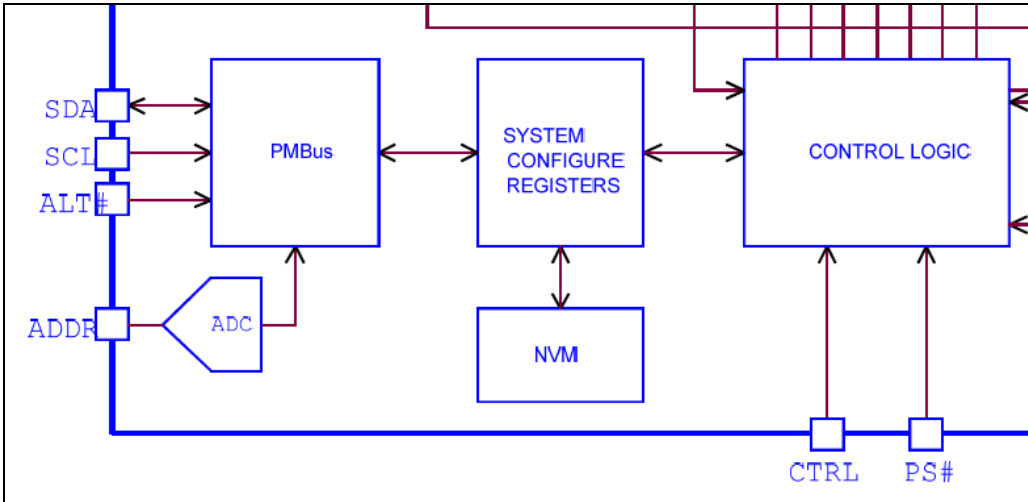
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>in said POL storage device.</p> <p>The turn-on data received from the PMBus are written to specific registers and moved into non-volatile memory (<i>e.g.</i>, Multiple Time Program or MTP cells). MPM3695-25 Data Sheet at 36, 50 (STORE_USER_ALL command).</p>  <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
<p>using at least said turn-on data and said slew-rate data to calculate a turn-on delay period corresponding to when said output is to be produced.</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of using at least said turn-on data and said slew-rate data to calculate a turn-on delay period corresponding to when said output is to be produced.</p> <p>As discussed above, the turn-on rise and delay (TON_RISE, TON_DELAY) and voltage transition slew rate (MFR_VOUT_STEP) data is used by the MP3695 to calculate a turn-on delay period corresponding to when said output is to be produced.</p>
<p>20. A method of determining at least one output timing parameter of at</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform a method of determining at least one</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Claim Elements	Representative MPS Power Control Products ^{1,2}
<p>least one point-of-load (“POL”) regulator comprising:</p>	<p>output-timing parameter of at least one point-of-load (“POL”) regulator.</p> <p>The MPM3695 power modules comprise point-of-load regulators that accept varied input voltages and generate varied output voltages to an attached load. <i>See, e.g.</i>, MPM3695-10 Data Sheet at 1; MPM3695-25 Data Sheet at 1; MPM3695-100 Data Sheet at 1.</p> <p>MPS touts the “scalability” and “programmability” of the power modules as significant features. MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at 2 (“Figure 5: MPM3695 Series Offers Scalability and Programmability”); <i>see also</i> https://www.monolithicpower.com/en/products/power-modules.html (last accessed June 11, 2021); Power Module Flyer at 1.</p> <p>The power modules, for instance, are programmed and controlled over a Power Management Bus (or PMBus):</p> <div data-bbox="919 776 1675 1133" data-label="Diagram"> </div> <p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5; <i>see also</i> MPM3695-10 Data Sheet at 1 (“The MPM3695-10 is a scalable, ultra-thin, fully integrated power module with a PMBus interface . . . [that] offers module configurability.”); MPM3695-25 Data Sheet at 1 (“The MPM3695-25 is a scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations” with various parameters being “[p]rogrammable via PMBus.”); MPM3695-100 Data Sheet at 1 (“The MPM3695-100 is a 100A, scalable, fully</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>integrated power module with a PMBus interface . . . [that] provides module configurations.”).</p> <p>The timing parameters of the MPM3695, for instance, are set over the PMBus. These programmable timing parameters include a turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), MPM3695-25 Data Sheet at 42, and a slew rate of an output voltage transition (via the MFR_VOUT_STEP command), MPM3695-25 Data Sheet at 50. Once set, these parameters are used to affect a desired output by the power module. MPM3695-25 Data Sheet at 8, 32-34.</p>
receiving slew-rate data from a controller;	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of receiving slew-rate data from a controller.</p> <p>As discussed above, the MPM3695 is connected to a common power management data bus (PMBus), over which output-timing data commands are received.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

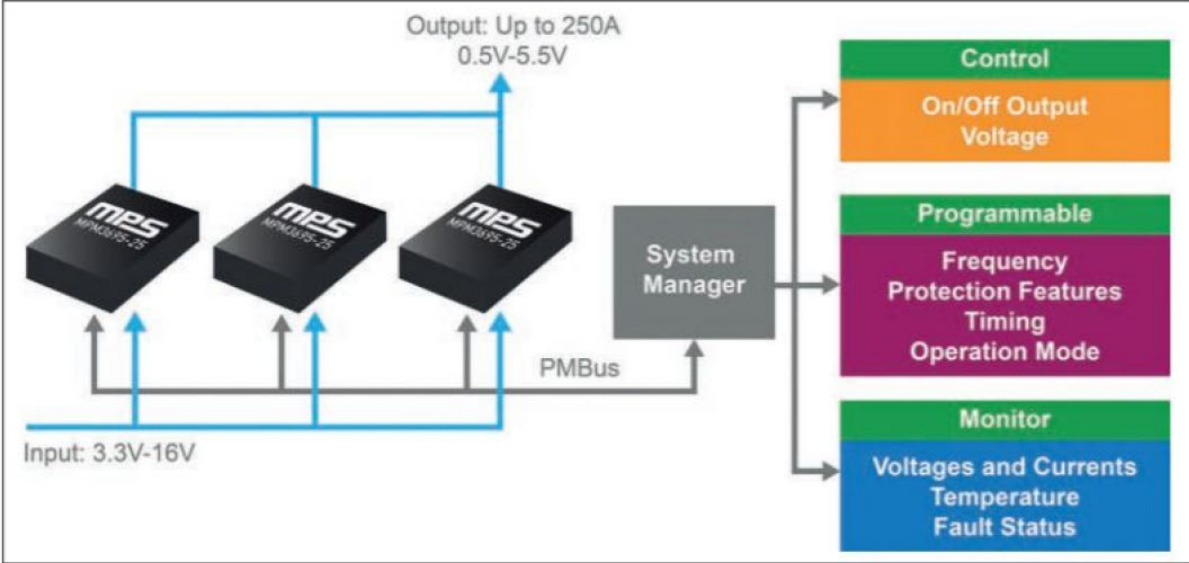
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p data-bbox="934 857 1648 885">Figure 5: MPM3695 Series Offers Scalability and Programmability</p> <p data-bbox="688 917 1915 1026">Yang, Monolithic Power, <i>Intelligent Scalable DC-DC Power Modules</i>, at Fig. 5. In particular, the controller transmits a 1-byte command for voltage transition slew rate (MFR_VOUT_STEP). MPM3695-25 Data Sheet at 50.</p>
storing said slew-rate data in a POL storage device;	<p data-bbox="688 1068 1915 1177">The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of storing said slew-rate data in a POL storage device.</p> <p data-bbox="688 1193 1915 1302">The slew-rate data received from the PMBus is written to specific registers and moved into non-volatile memory (e.g., Multiple Time Program or MTP cells). MPM3695-25 Data Sheet at 36, 50 (STORE_USER_ALL command).</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

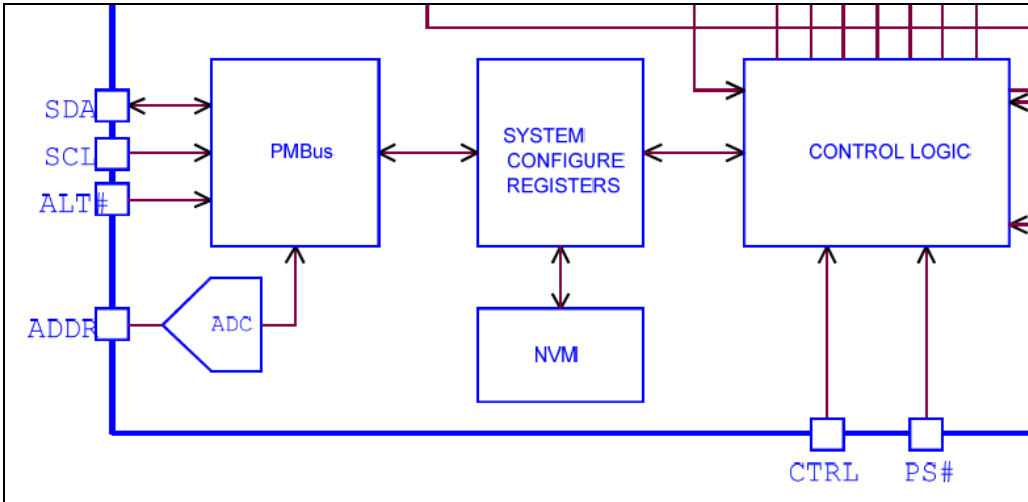
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
receiving enable data from said controller;	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of receiving enable data from said controller.</p> <p>The MPM3695, for example, is placed into operation based on an OPERATION and/or ON_OFF_CONFIG command received over the PMBus. MPM3695 Data Sheet at 35.</p>
using said slew-rate data to determine the slew-rate of an output of said at least one POL regulator;	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of using said slew-rate data to determine the slew-rate of an output of said at least one POL regulator.</p> <p>The output-timing data received by the MPM3695 is used to determine a corresponding command for voltage transition slew rate (MFR_VOUT_STEP). MPM3695-25 Data Sheet at 50. The values associated with the commands are then used to determine the slew-rate of an output of said at least one POL regulator.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

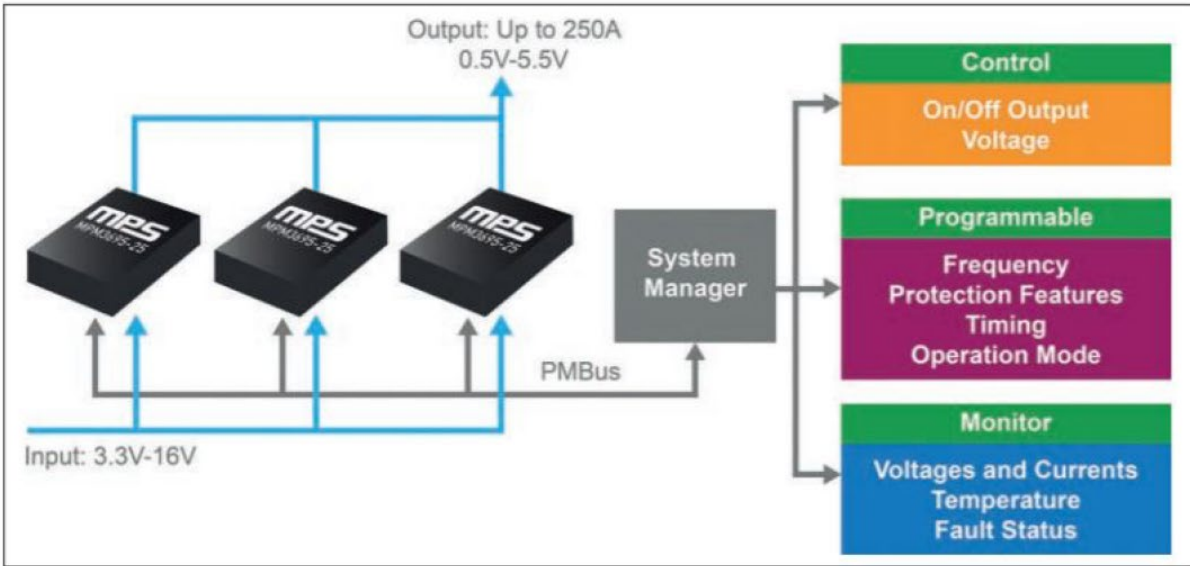
Claim Elements	Representative MPS Power Control Products ^{1,2}
<p>receiving turn-off data from said controller;</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of receiving sequencing data from said controller.</p> <p>As discussed above, the MPM3695 power modules are connected to a common power management data bus (PMBus), over which commands can be received.</p>  <p>Figure 5: MPM3695 Series Offers Scalability and Programmability</p> <p>Yang, Monolithic Power, <i>Intelligent Scalable DC-DC Power Modules</i>, at Fig. 5.</p> <p>In particular, the controller transmits 1 to 2-byte commands for turn-off delay (TOFF_DELAY). MPM3695-25 Data Sheet at 42.</p>
<p>storing said turn-off data in said POL storage device; and</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of storing said sequencing data</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

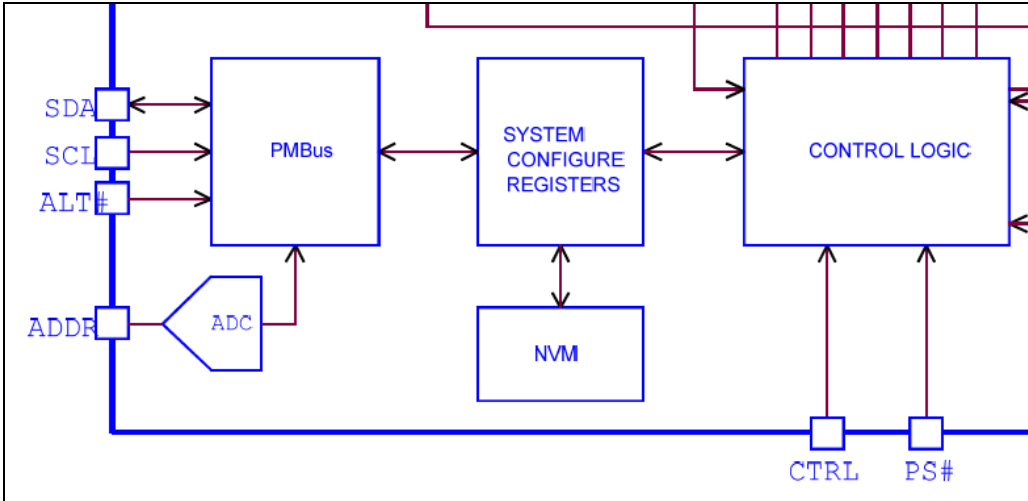
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>in said POL storage device.</p> <p>The turn-off data received from the PMBus are written to specific registers and moved into non-volatile memory (<i>e.g.</i>, Multiple Time Program or MTP cells). MPM3695-25 Data Sheet at 36, 50 (STORE_USER_ALL command).</p>  <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
<p>using said turn-off data and said slew-rate data to calculate a turn-off delay period corresponding to when said output is to be terminate.</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, operate to perform the step of using said turn-off data and said slew-rate data to calculate a turn-off delay period corresponding to when said output is to be terminate.</p> <p>As discussed above, the turn-off delay (TOFF_DELAY) and voltage transition slew rate (MFR_VOUT_STEP) data is used by the MP3695 to calculate a turn-off delay period corresponding to when said output is to be terminated.</p>
<p>21. A point-of-load regulator</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25,</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Claim Elements	Representative MPS Power Control Products ^{1,2}
<p>comprising:</p>	<p>and MPM3695-100 power modules, comprise a point-of-load regulator.</p> <p>The MPM3695 power modules comprise point-of-load regulators that accept varied input voltages and generate varied output voltages to an attached load. <i>See, e.g.</i>, MPM3695-10 Data Sheet at 1; MPM3695-25 Data Sheet at 1; MPM3695-100 Data Sheet at 1.</p> <p>MPS touts the “scalability” and “programmability” of the power modules as significant features. MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at 2 (“Figure 5: MPM3695 Series Offers Scalability and Programmability”); <i>see also</i> https://www.monolithicpower.com/en/products/power-modules.html (last accessed June 11, 2021); Power Module Flyer at 1.</p> <p>The power modules, for instance, are programmed and controlled over a Power Management Bus (or PMBus):</p> <div data-bbox="919 773 1675 1133" data-label="Diagram"> </div> <p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5; <i>see also</i> MPM3695-10 Data Sheet at 1 (“The MPM3695-10 is a scalable, ultra-thin, fully integrated power module with a PMBus interface . . . [that] offers module configurability.”); MPM3695-25 Data Sheet at 1 (“The MPM3695-25 is a scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations” with various parameters being “[p]rogrammable via PMBus.”); MPM3695-100 Data Sheet at 1 (“The MPM3695-100 is a 100A, scalable, fully</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>integrated power module with a PMBus interface . . . [that] provides module configurations.”).</p> <p>The timing parameters of the MPM3695, for instance, are set over the PMBus. These programmable timing parameters include a turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), MPM3695-25 Data Sheet at 42, and a slew rate of an output voltage transition (via the MFR_VOUT_STEP command), MPM3695-25 Data Sheet at 50. Once set, these parameters are used to affect a desired output by the power module. MPM3695-25 Data Sheet at 8, 32-34.</p>
a serial data bus interface;	<p>The MPM3695 power modules comprise a serial data bus interface.</p> <p>As discussed above, the MPS power modules are programmed over a PMBus. The MPM3695, for example, “is a scalable, fully integrated power module with a PMBus interface.” MPM3695 Data Sheet at 1. The PMBus is a bidirectional serial interface, consisting of a data line (SDA) and a clock line (SCL), that allows for configuration of the power module and monitoring of key parameters. MPM3695 Data Sheet at 1, 29.</p>
a storage device adapted to store output data received externally via said serial data bus interface;	<p>The MPM3695 power modules comprise a storage device adapted to store output data received externally via said serial data bus interface.</p> <p>The data received by the power module from its PMBus interface are written to specific registers and moved into non-volatile memory (<i>e.g.</i>, Multiple Time Program or MTP cells). MPM3695-25 Data Sheet at 32-34, 36 (STORE_USER_ALL command).</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

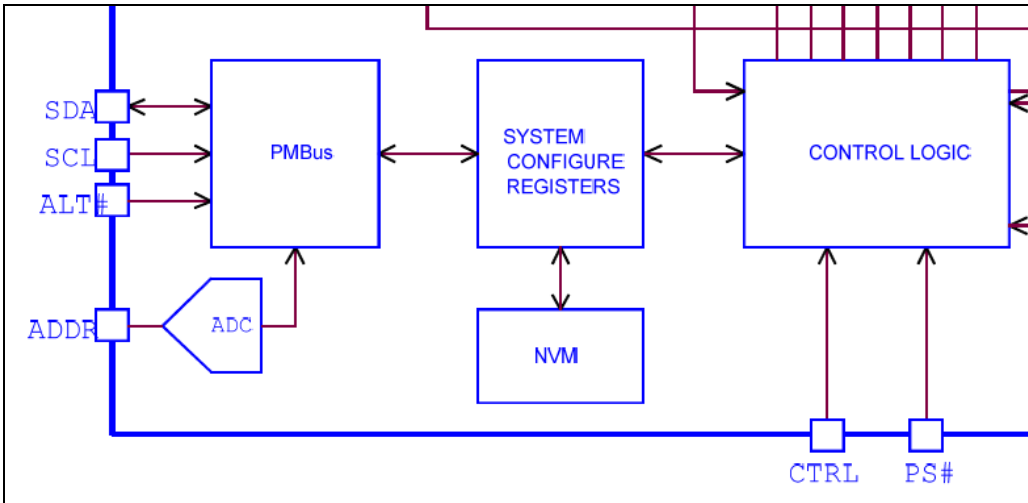
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
a control unit adapted to calculate at least one timing parameter based on said output data; and	<p>The MPM3695 power modules comprise a control unit adapted to calculate at least one timing parameter based on said output data.</p> <p>The output data received by the power module from its PMBus interface is also used (<i>i.e.</i>, by the control logic) to calculate a timing parameter for the power module.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

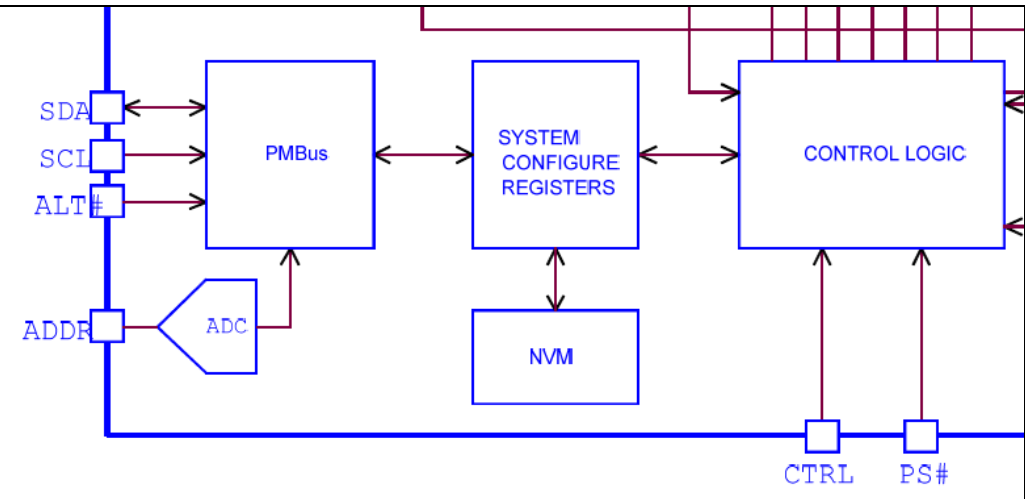
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>MPM3695-25 Data Sheet at 19 (cropped for clarity). The output data received by the MPM3695, for example, are used to determine a corresponding command for turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY). MPM3695-25 Data Sheet at 42.</p>
an output builder adapted to generate an output voltage in accordance with said at least one timing parameter.	<p>The MPM3695 power modules comprise an output builder adapted to generate an output voltage in accordance with said at least one timing parameter.</p> <p>The MPM3695 provides an output voltage to a connected load, with output voltage parameters being programmable via the PMBus. MPM3695 Data Sheet at 23.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

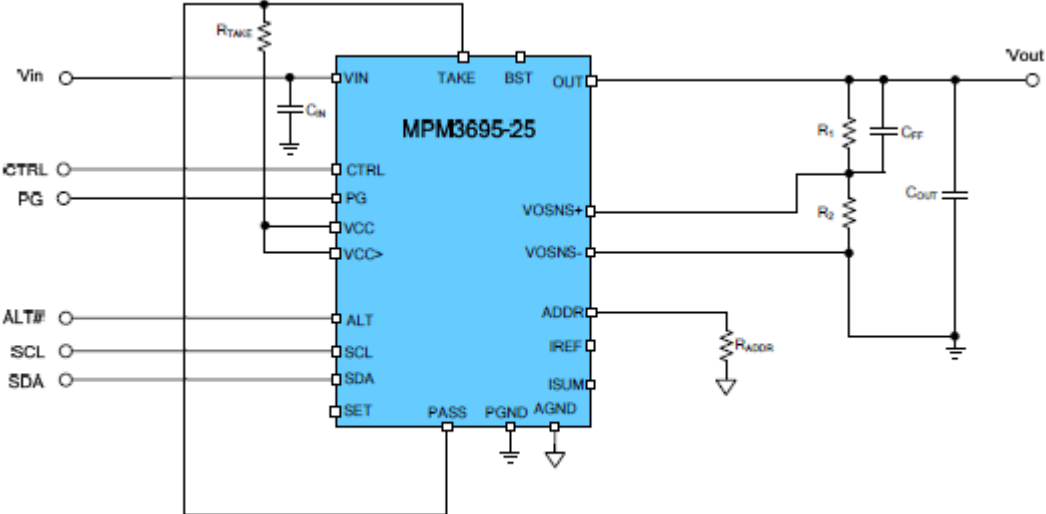
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p style="text-align: center;">Single Phase Operation</p> <p>MPM3695 Data Sheet at 2.</p>

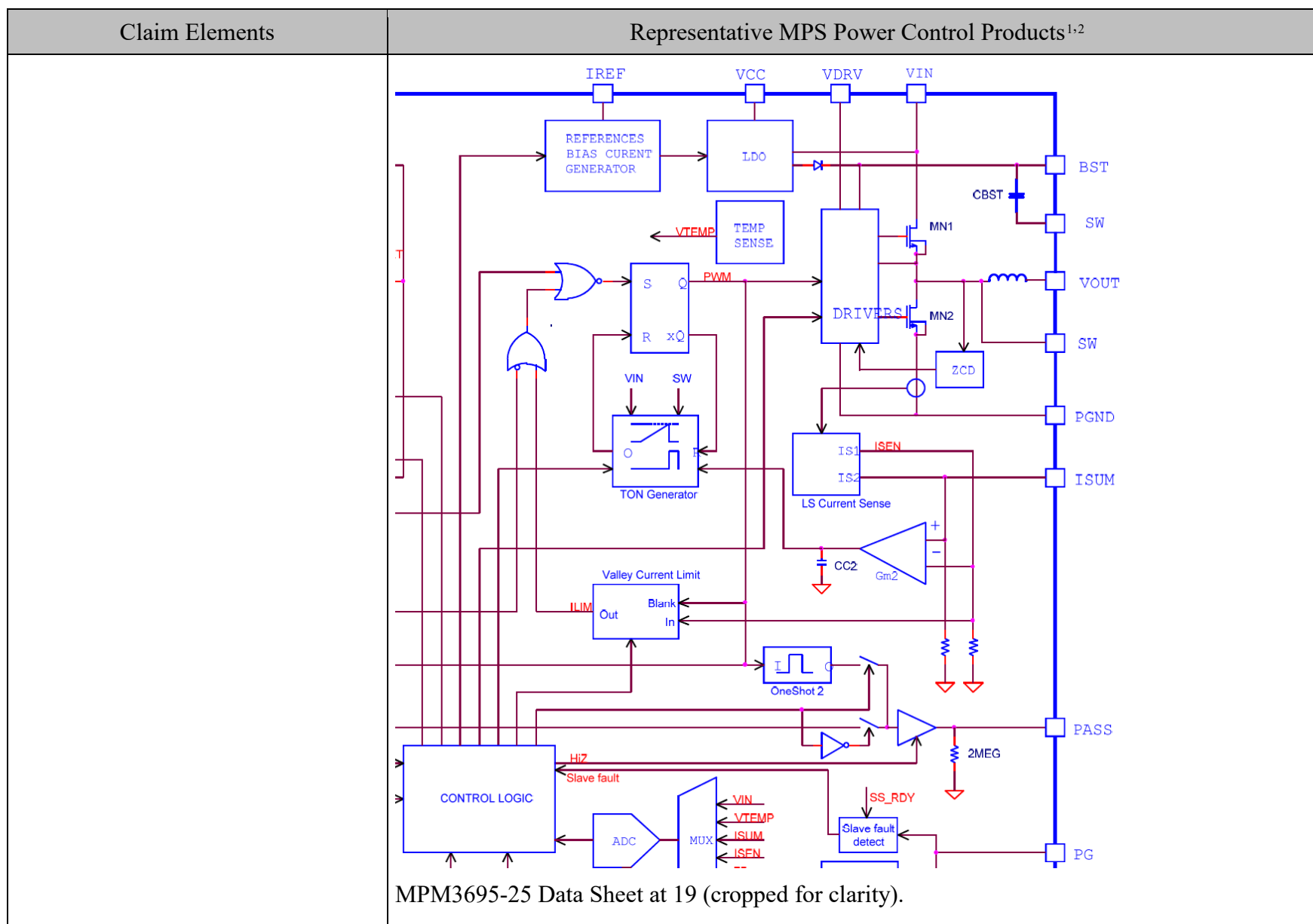
Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Claim Elements	Representative MPS Power Control Products ^{1,2}
<p>22. A point-of-load regulator comprising:</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, comprise a point-of-load regulator.</p> <p>The MPM3695 power modules comprise point-of-load regulators that accept varied input voltages and generate varied output voltages to an attached load. <i>See, e.g.</i>, MPM3695-10 Data Sheet at 1; MPM3695-25 Data Sheet at 1; MPM3695-100 Data Sheet at 1.</p> <p>MPS touts the “scalability” and “programmability” of the power modules as significant features. MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at 2 (“Figure 5: MPM3695 Series Offers Scalability and Programmability”); <i>see also</i> https://www.monolithicpower.com/en/products/power-modules.html (last accessed June 11, 2021); Power Module Flyer at 1.</p> <p>The power modules, for instance, are programmed and controlled over a Power Management Bus (or PMBus):</p> <div data-bbox="919 808 1675 1166" data-label="Diagram"> </div> <p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5; <i>see also</i> MPM3695-10 Data Sheet at 1 (“The MPM3695-10 is a scalable, ultra-thin, fully integrated power module with a PMBus interface . . . [that] offers module configurability.”); MPM3695-25 Data Sheet at 1 (“The MPM3695-25 is a scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations” with various parameters being “[p]rogrammable via</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>PMBus.”); MPM3695-100 Data Sheet at 1 (“The MPM3695-100 is a 100A, scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations.”).</p> <p>The timing parameters of the MPM3695, for instance, are set over the PMBus. These programmable timing parameters include a turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), MPM3695-25 Data Sheet at 42, and a slew rate of an output voltage transition (via the MFR_VOUT_STEP command), MPM3695-25 Data Sheet at 50. Once set, these parameters are used to affect a desired output by the power module. MPM3695-25 Data Sheet at 8, 32-34.</p>
a serial data bus interface;	<p>The MPM3695 power modules comprise a serial data bus interface.</p> <p>As discussed above, the MPS power modules are programmed over a PMBus. The MPM3695, for example, “is a scalable, fully integrated power module with a PMBus interface.” MPM3695 Data Sheet at 1. The PMBus is a bidirectional serial interface, consisting of a data line (SDA) and a clock line (SCL), that allows for configuration of the power module and monitoring of key parameters. MPM3695 Data Sheet at 1, 29.</p>
a storage device adapted to store output data received externally via said serial data bus interface;	<p>The MPM3695 power modules comprise a storage device adapted to store output data received externally via said serial data bus interface.</p> <p>The data received by the power module from its PMBus interface are written to specific registers and moved into non-volatile memory (<i>e.g.</i>, Multiple Time Program or MTP cells). MPM3695-25 Data Sheet at 32-34, 36 (STORE_USER_ALL command).</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

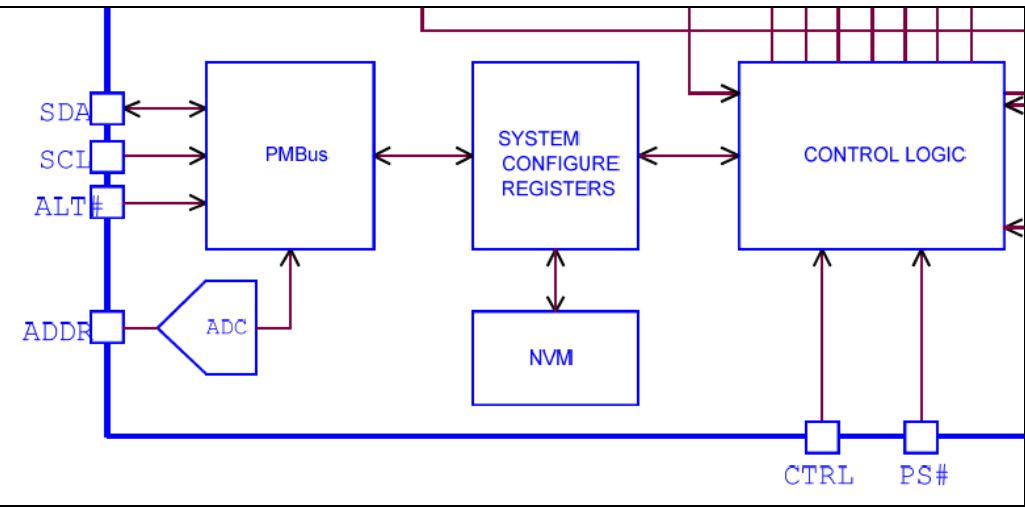
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
a control unit adapted to calculate at least one timing parameter based on said output data; and	<p>The MPM3695 power modules comprise a control unit adapted to calculate at least one timing parameter based on said output data.</p> <p>The output data received by the power module from its PMBus interface is also used (<i>i.e.</i>, by the control logic) to calculate a timing parameter for the power module.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

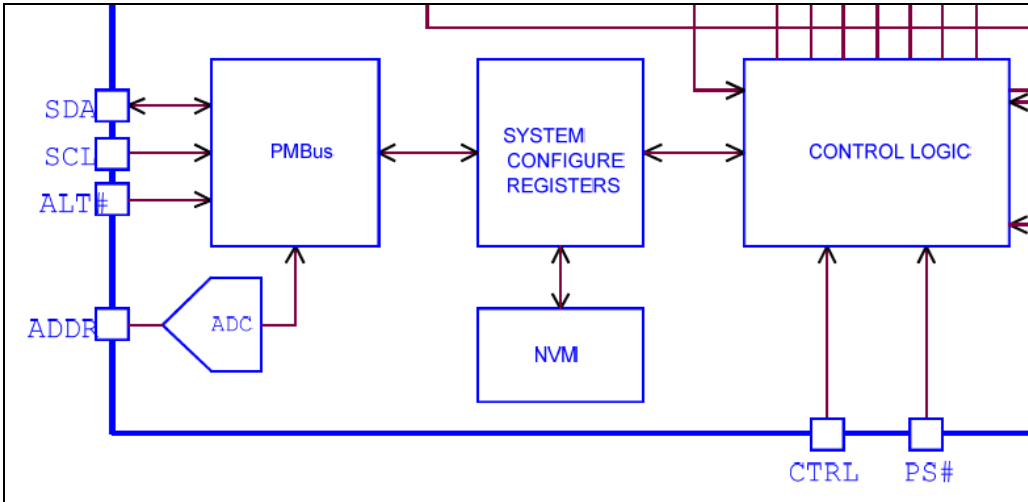
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>The diagram illustrates the internal architecture of MPS Power Control Products. It features a central PMBus interface connected to SDA, SCL, and ALT# pins. An ADC is connected to the ADDR pin and the PMBus. The PMBus is bidirectionally connected to the SYSTEM CONFIGURE REGISTERS, which in turn are connected to the CONTROL LOGIC. Non-Volatile Memory (NVM) is also connected to the SYSTEM CONFIGURE REGISTERS. The CONTROL LOGIC is connected to the CTRL and PS# pins. A multi-pin bus is shown at the top of the CONTROL LOGIC block.</p> <p>MPM3695-25 Data Sheet at 19 (cropped for clarity). The output data received by the MPM3695, for example, are used to determine a corresponding command for turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY). MPM3695-25 Data Sheet at 42.</p>
an output builder adapted to generate an output voltage in accordance with said at least one timing parameter;	<p>The MPM3695 power modules comprise an output builder adapted to generate an output voltage in accordance with said at least one timing parameter.</p> <p>The MPM3695 provides an output voltage to a connected load, with output voltage parameters being programmable via the PMBus. MPM3695 Data Sheet at 23.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

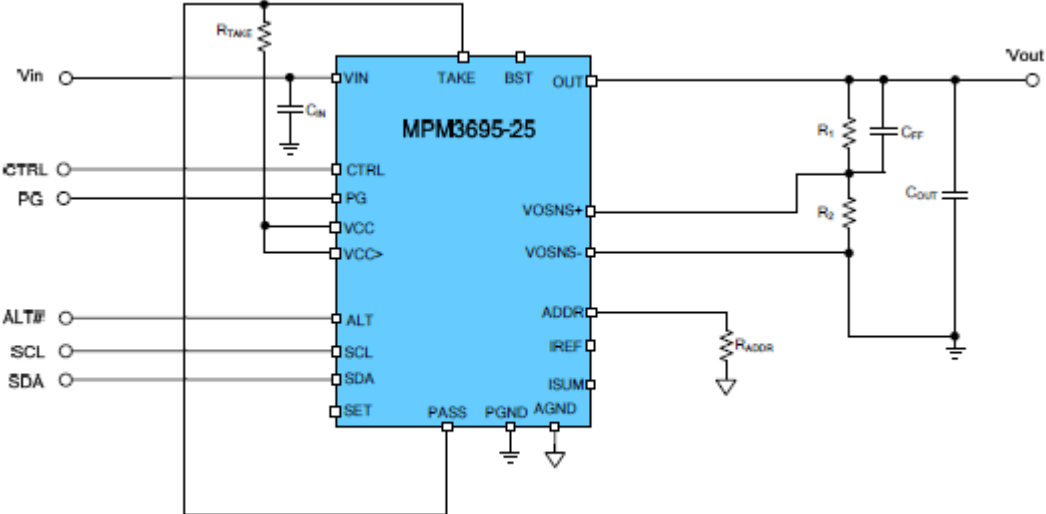
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p style="text-align: center;">Single Phase Operation</p> <p>MPM3695 Data Sheet at 2.</p>

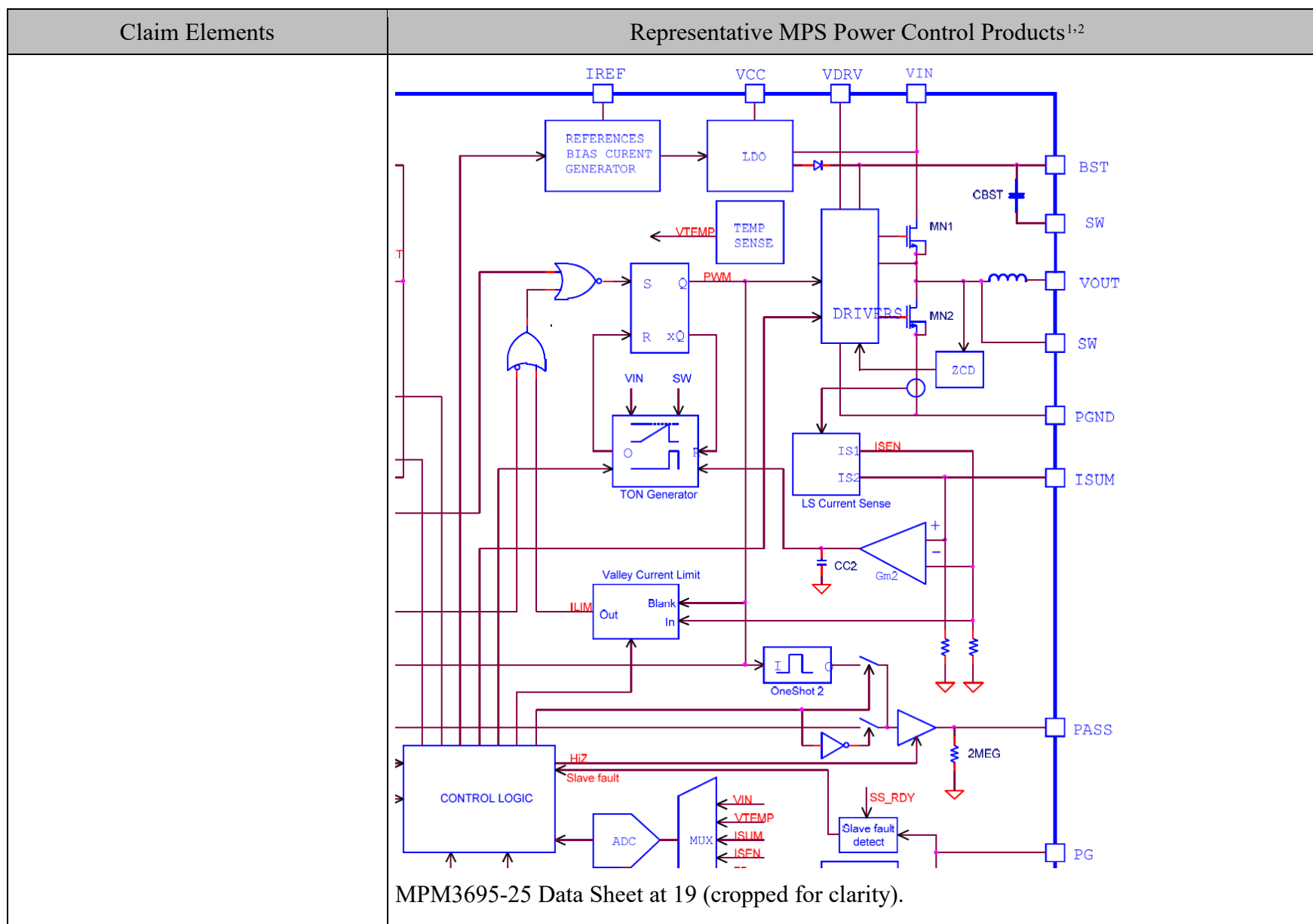
Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Claim Elements	Representative MPS Power Control Products ^{1,2}
<p>wherein said output data further comprises sequencing data and said control unit is further adapted to calculate a time when said output voltage is to be generated, said time being determined in accordance with said sequencing data.</p>	<p>Per the discussion above, the output data received by the MPM3695 are used to determine a corresponding command for turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), which constitute sequencing data. MPM3695-25 Data Sheet at 42. The values associated with the commands are then used to calculate a time when said output voltage is to be generated.</p>
<p>23. A point-of-load regulator comprising:</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, comprise a point-of-load regulator.</p> <p>The MPM3695 power modules comprise point-of-load regulators that accept varied input voltages and generate varied output voltages to an attached load. <i>See, e.g.</i>, MPM3695-10 Data Sheet at 1; MPM3695-25 Data Sheet at 1; MPM3695-100 Data Sheet at 1.</p> <p>MPS touts the “scalability” and “programmability” of the power modules as significant features. MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at 2 (“Figure 5: MPM3695 Series Offers Scalability and Programmability”); <i>see also</i> https://www.monolithicpower.com/en/products/power-modules.html (last accessed June 11, 2021); Power Module Flyer at 1.</p> <p>The power modules, for instance, are programmed and controlled over a Power Management Bus (or PMBus):</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

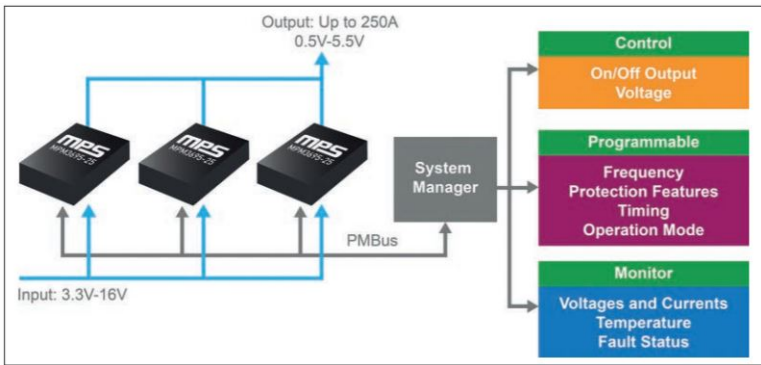
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5; <i>see also</i> MPM3695-10 Data Sheet at 1 (“The MPM3695-10 is a scalable, ultra-thin, fully integrated power module with a PMBus interface . . . [that] offers module configurability.”); MPM3695-25 Data Sheet at 1 (“The MPM3695-25 is a scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations” with various parameters being “[p]rogrammable via PMBus.”); MPM3695-100 Data Sheet at 1 (“The MPM3695-100 is a 100A, scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations.”).</p> <p>The timing parameters of the MPM3695, for instance, are set over the PMBus. These programmable timing parameters include a turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), MPM3695-25 Data Sheet at 42, and a slew rate of an output voltage transition (via the MFR_VOUT_STEP command), MPM3695-25 Data Sheet at 50. Once set, these parameters are used to affect a desired output by the power module. MPM3695-25 Data Sheet at 8, 32-34.</p>
a serial data bus interface;	<p>The MPM3695 power modules comprise a serial data bus interface.</p> <p>As discussed above, the MPS power modules are programmed over a PMBus. The MPM3695, for example, “is a scalable, fully integrated power module with a PMBus interface.” MPM3695 Data Sheet at 1. The PMBus is a bidirectional serial interface, consisting of a data line (SDA)</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

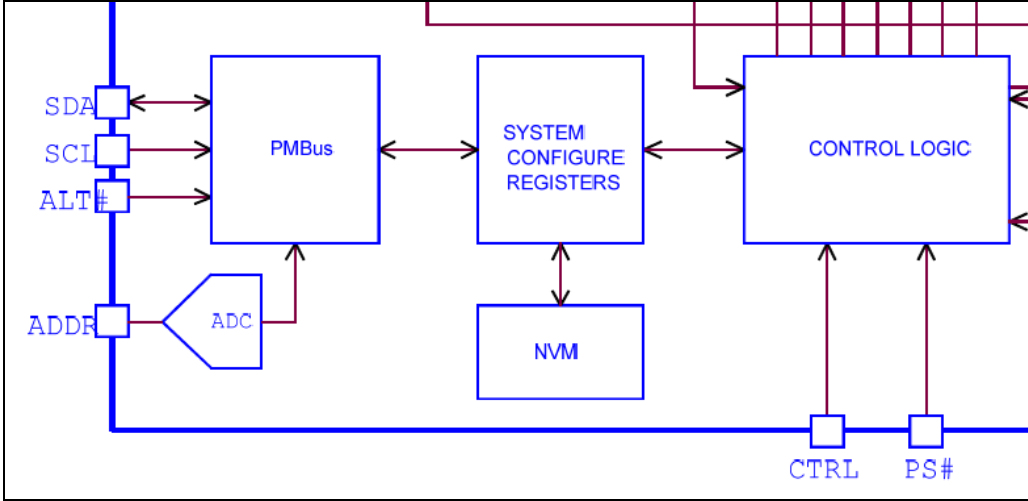
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>and a clock line (SCL), that allows for configuration of the power module and monitoring of key parameters. MPM3695 Data Sheet at 1, 29.</p>
<p>a storage device adapted to store output data received externally via said serial data bus interface;</p>	<p>The MPM3695 power modules comprise a storage device adapted to store output data received externally via said serial data bus interface.</p> <p>The data received by the power module from its PMBus interface are written to specific registers and moved into non-volatile memory (<i>e.g.</i>, Multiple Time Program or MTP cells). MPM3695-25 Data Sheet at 32-34, 36 (STORE_USER_ALL command).</p>  <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
<p>a control unit adapted to calculate at least one timing parameter based on said output data; and</p>	<p>The MPM3695 power modules comprise a control unit adapted to calculate at least one timing parameter based on said output data.</p> <p>The output data received by the power module from its PMBus interface is also used (<i>i.e.</i>, by the control logic) to calculate a timing parameter for the power module.</p>

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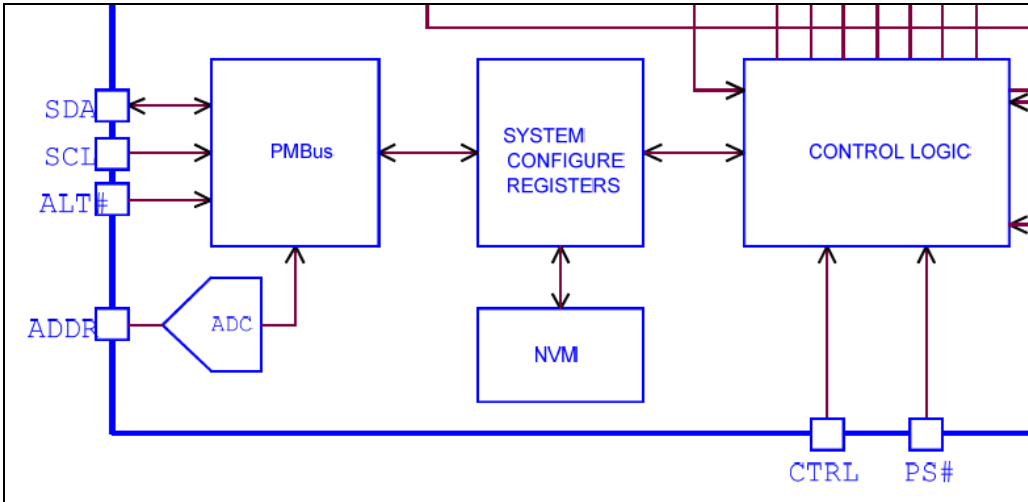
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p data-bbox="688 781 1915 922">MPM3695-25 Data Sheet at 19 (cropped for clarity). The output data received by the MPM3695, for example, are used to determine a corresponding command for turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY). MPM3695-25 Data Sheet at 42.</p>
an output builder adapted to generate an output voltage in accordance with said at least one timing parameter;	<p data-bbox="688 966 1915 1036">The MPM3695 power modules comprise an output builder adapted to generate an output voltage in accordance with said at least one timing parameter.</p> <p data-bbox="688 1052 1915 1122">The MPM3695 provides an output voltage to a connected load, with output voltage parameters being programmable via the PMBus. MPM3695 Data Sheet at 23.</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

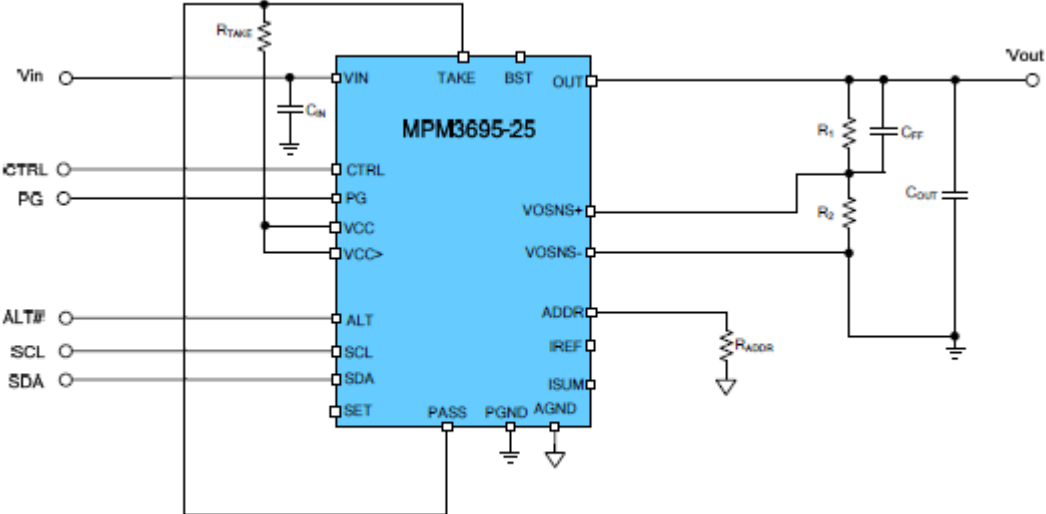
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p style="text-align: center;">Single Phase Operation</p> <p>MPM3695 Data Sheet at 2.</p>

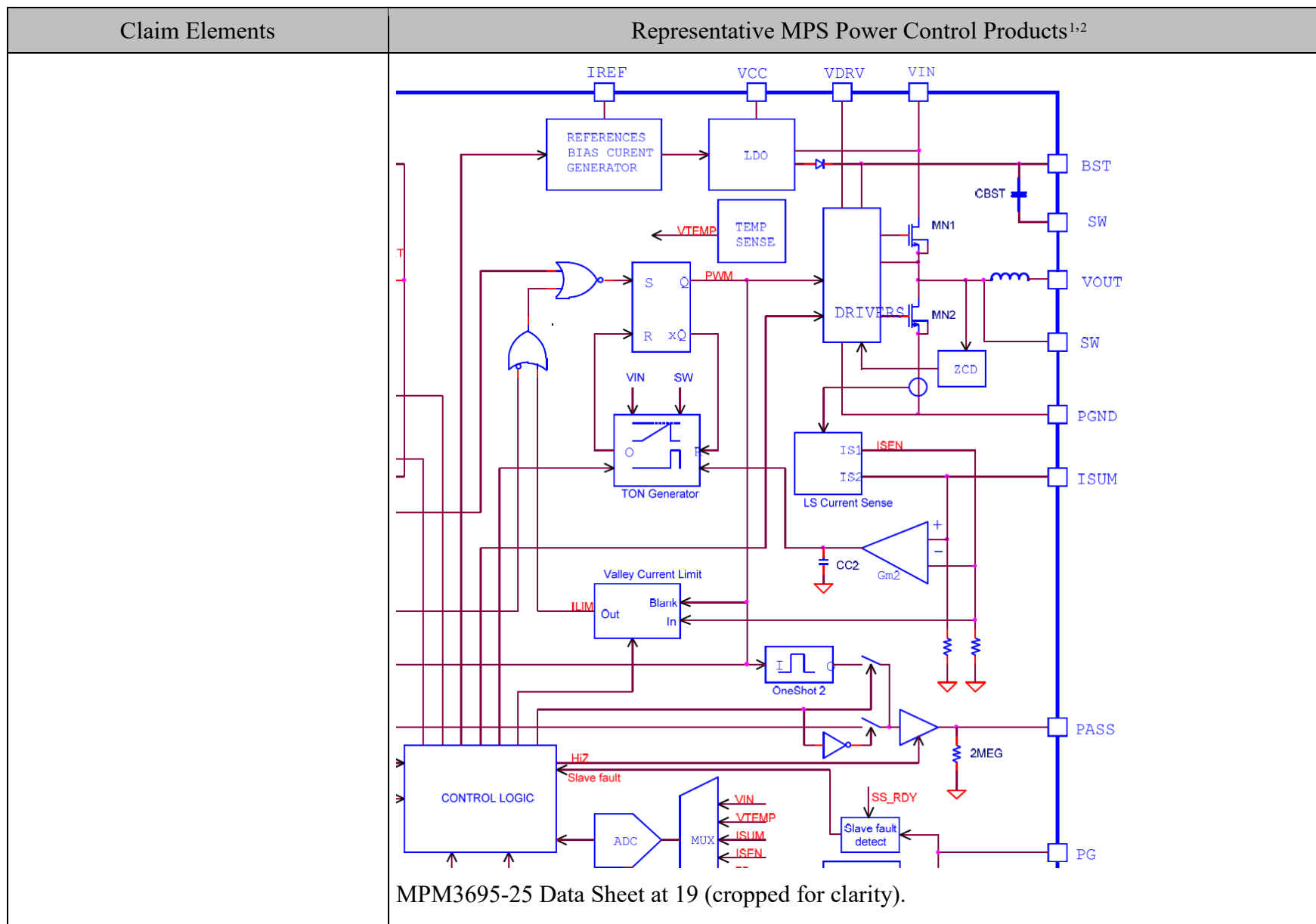
Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Claim Elements	Representative MPS Power Control Products ^{1,2}
<p>wherein said output data further comprises slew-rate data and said control unit is further adapted to determine a slew rate for said output voltage, said slew rate being determined in accordance with said slew-rate data.</p>	<p>Per the discussion above, the output data received by the MPM3695 is used to determine a corresponding command for turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY) and for voltage transition slew rate (MFR_VOUT_STEP). The values associated with the commands are then used to determine a slew rate for the output voltage of the power module.</p>
<p>24. A point-of-load regulator comprising:</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, comprise a point-of-load regulator.</p> <p>The MPM3695 power modules comprise point-of-load regulators that accept varied input voltages and generate varied output voltages to an attached load. <i>See, e.g.</i>, MPM3695-10 Data Sheet at 1; MPM3695-25 Data Sheet at 1; MPM3695-100 Data Sheet at 1.</p> <p>MPS touts the “scalability” and “programmability” of the power modules as significant features. MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at 2 (“Figure 5: MPM3695 Series Offers Scalability and Programmability”); <i>see also</i> https://www.monolithicpower.com/en/products/power-modules.html (last accessed June 11, 2021); Power Module Flyer at 1.</p> <p>The power modules, for instance, are programmed and controlled over a Power Management Bus (or PMBus):</p>

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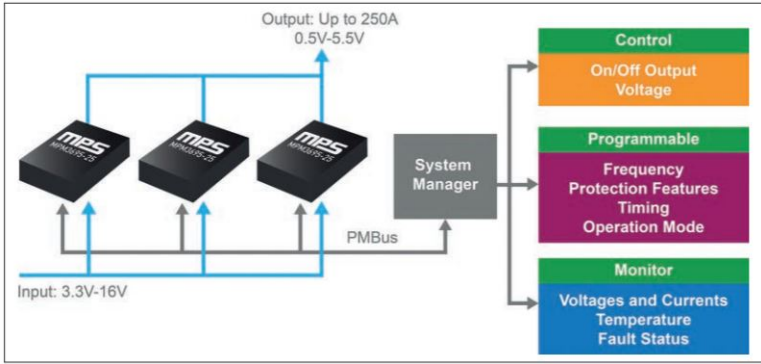
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5; <i>see also</i> MPM3695-10 Data Sheet at 1 (“The MPM3695-10 is a scalable, ultra-thin, fully integrated power module with a PMBus interface . . . [that] offers module configurability.”); MPM3695-25 Data Sheet at 1 (“The MPM3695-25 is a scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations” with various parameters being “[p]rogrammable via PMBus.”); MPM3695-100 Data Sheet at 1 (“The MPM3695-100 is a 100A, scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations.”).</p> <p>The timing parameters of the MPM3695, for instance, are set over the PMBus. These programmable timing parameters include a turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), MPM3695-25 Data Sheet at 42, and a slew rate of an output voltage transition (via the MFR_VOUT_STEP command), MPM3695-25 Data Sheet at 50. Once set, these parameters are used to affect a desired output by the power module. MPM3695-25 Data Sheet at 8, 32-34.</p>
a serial data bus interface;	<p>The MPM3695 power modules comprise a serial data bus interface.</p> <p>As discussed above, the MPS power modules are programmed over a PMBus. The MPM3695, for example, “is a scalable, fully integrated power module with a PMBus interface.” MPM3695 Data Sheet at 1. The PMBus is a bidirectional serial interface, consisting of a data line (SDA)</p>

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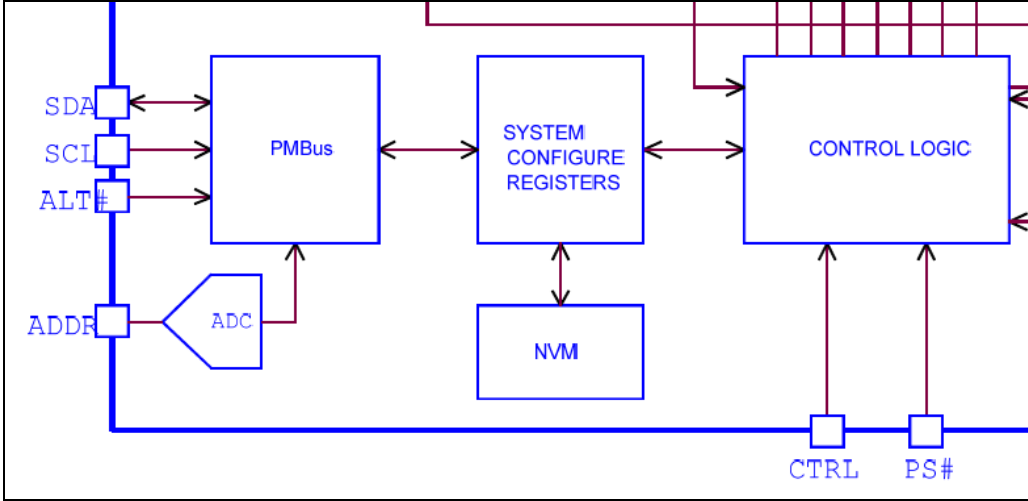
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>and a clock line (SCL), that allows for configuration of the power module and monitoring of key parameters. MPM3695 Data Sheet at 1, 29.</p>
<p>a storage device adapted to store output data received externally via said serial data bus interface;</p>	<p>The MPM3695 power modules comprise a storage device adapted to store output data received externally via said serial data bus interface.</p> <p>The data received by the power module from its PMBus interface are written to specific registers and moved into non-volatile memory (<i>e.g.</i>, Multiple Time Program or MTP cells). MPM3695-25 Data Sheet at 32-34, 36 (STORE_USER_ALL command).</p>  <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
<p>a control unit adapted to calculate at least one timing parameter based on said output data; and</p>	<p>The MPM3695 power modules comprise a control unit adapted to calculate at least one timing parameter based on said output data.</p> <p>The output data received by the power module from its PMBus interface is also used (<i>i.e.</i>, by the control logic) to calculate a timing parameter for the power module.</p>

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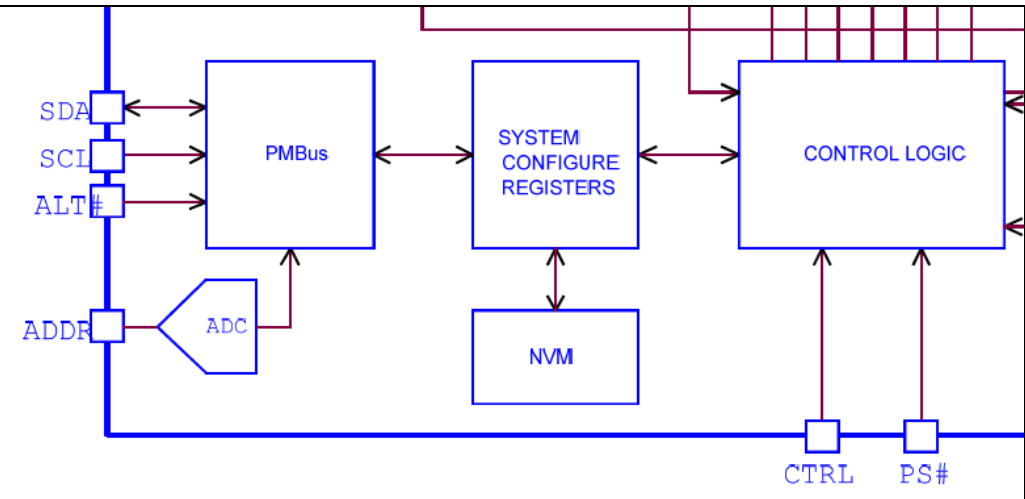
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>MPM3695-25 Data Sheet at 19 (cropped for clarity). The output data received by the MPM3695, for example, are used to determine a corresponding command for turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY). MPM3695-25 Data Sheet at 42.</p>
an output builder adapted to generate an output voltage in accordance with said at least one timing parameter;	<p>The MPM3695 power modules comprise an output builder adapted to generate an output voltage in accordance with said at least one timing parameter.</p> <p>The MPM3695 provides an output voltage to a connected load, with output voltage parameters being programmable via the PMBus. MPM3695 Data Sheet at 23.</p>

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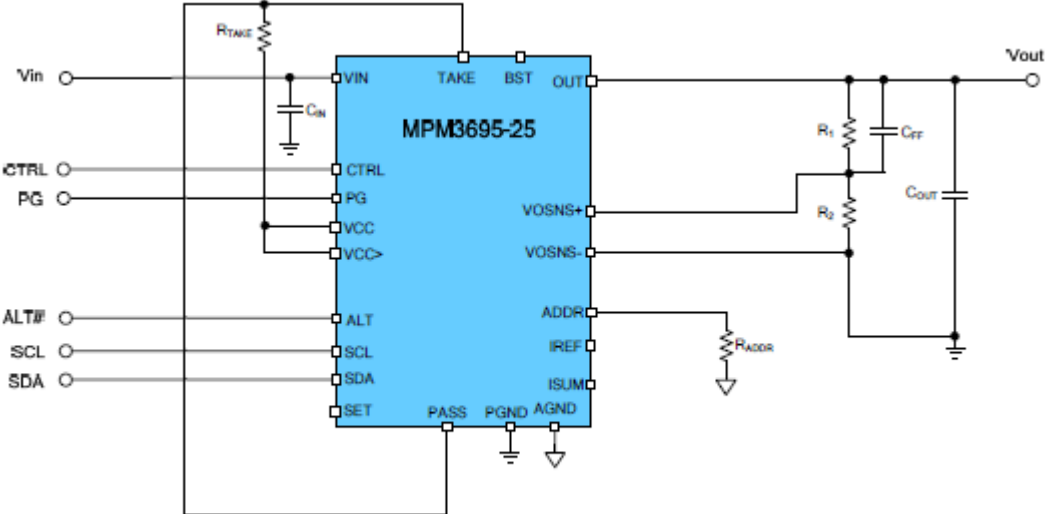
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p data-bbox="1050 820 1396 852" style="text-align: center;">Single Phase Operation</p> <p data-bbox="688 933 1039 966">MPM3695 Data Sheet at 2.</p>

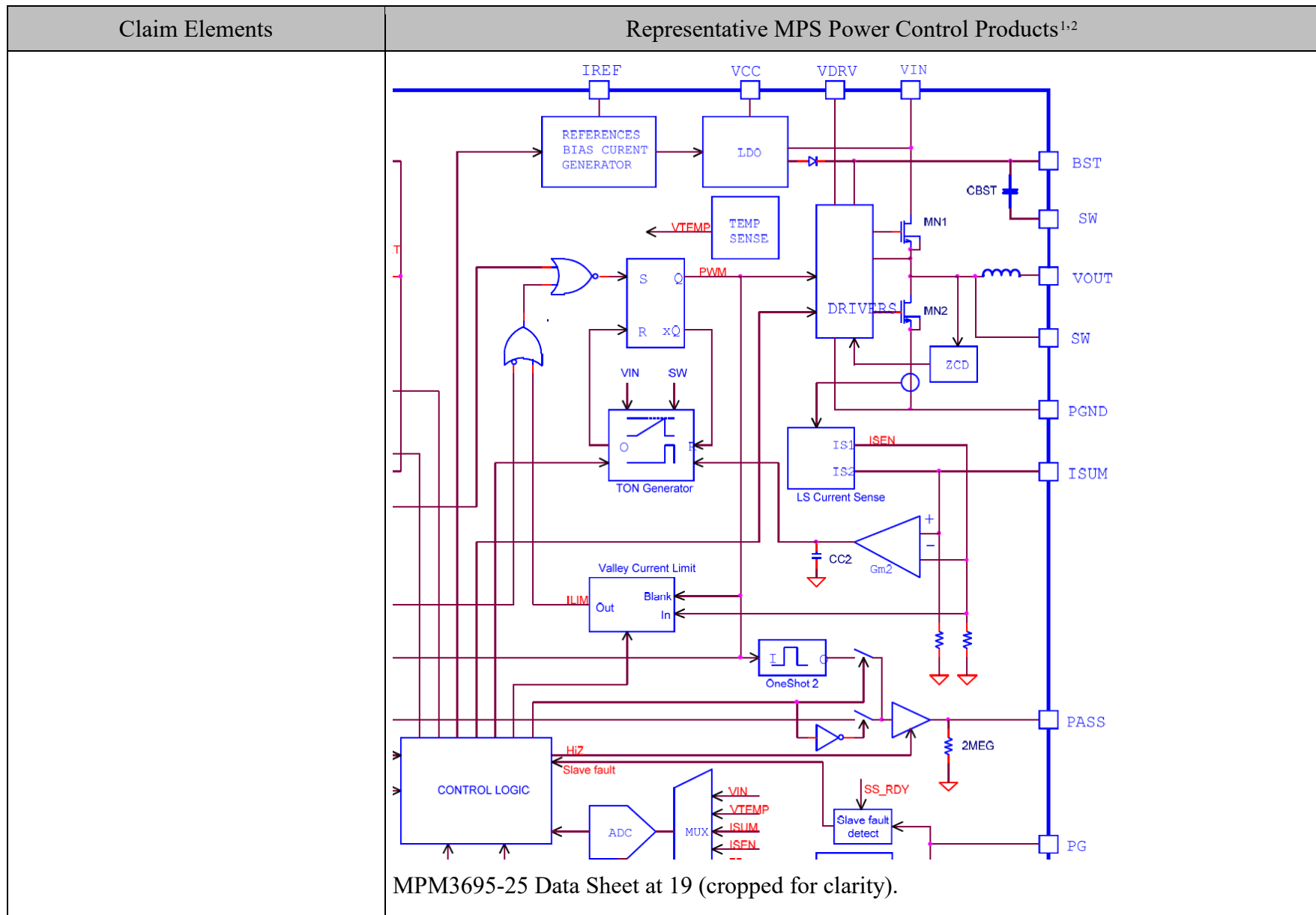
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Claim Elements	Representative MPS Power Control Products ^{1,2}
<p>wherein said output data further comprises turn-off data and said control unit is further adapted to calculate a turn-off period of time that is to be waited before said control unit terminates said output, said turn-off data being used to calculate said turn-off period of time.</p>	<p>Per the discussion above, the output received by the MPM3695 is used to determine a corresponding command for turn-off delay (TOFF_DELAY). MPM3695-25 Data Sheet at 42. The values associated with the commands are then used to calculate a turn-off period of time that is to be waited before said control unit terminates said output.</p>
<p>25. A point-of-load regulator comprising:</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, comprise a point-of-load regulator.</p> <p>The MPM3695 power modules comprise point-of-load regulators that accept varied input voltages and generate varied output voltages to an attached load. <i>See, e.g.,</i> MPM3695-10 Data Sheet at 1; MPM3695-25 Data Sheet at 1; MPM3695-100 Data Sheet at 1.</p> <p>MPS touts the “scalability” and “programmability” of the power modules as significant features. MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at 2 (“Figure 5: MPM3695 Series Offers Scalability and Programmability”); <i>see also</i> https://www.monolithicpower.com/en/products/power-modules.html (last accessed June 11, 2021); Power Module Flyer at 1.</p> <p>The power modules, for instance, are programmed and controlled over a Power Management Bus (or PMBus):</p>

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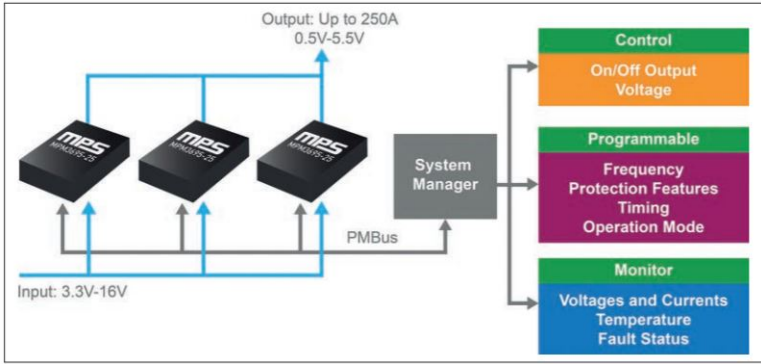
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5; <i>see also</i> MPM3695-10 Data Sheet at 1 (“The MPM3695-10 is a scalable, ultra-thin, fully integrated power module with a PMBus interface . . . [that] offers module configurability.”); MPM3695-25 Data Sheet at 1 (“The MPM3695-25 is a scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations” with various parameters being “[p]rogrammable via PMBus.”); MPM3695-100 Data Sheet at 1 (“The MPM3695-100 is a 100A, scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations.”).</p> <p>The timing parameters of the MPM3695, for instance, are set over the PMBus. These programmable timing parameters include a turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), MPM3695-25 Data Sheet at 42, and a slew rate of an output voltage transition (via the MFR_VOUT_STEP command), MPM3695-25 Data Sheet at 50. Once set, these parameters are used to affect a desired output by the power module. MPM3695-25 Data Sheet at 8, 32-34.</p>
a serial data bus interface;	<p>The MPM3695 power modules comprise a serial data bus interface.</p> <p>As discussed above, the MPS power modules are programmed over a PMBus. The MPM3695, for example, “is a scalable, fully integrated power module with a PMBus interface.” MPM3695 Data Sheet at 1. The PMBus is a bidirectional serial interface, consisting of a data line (SDA)</p>

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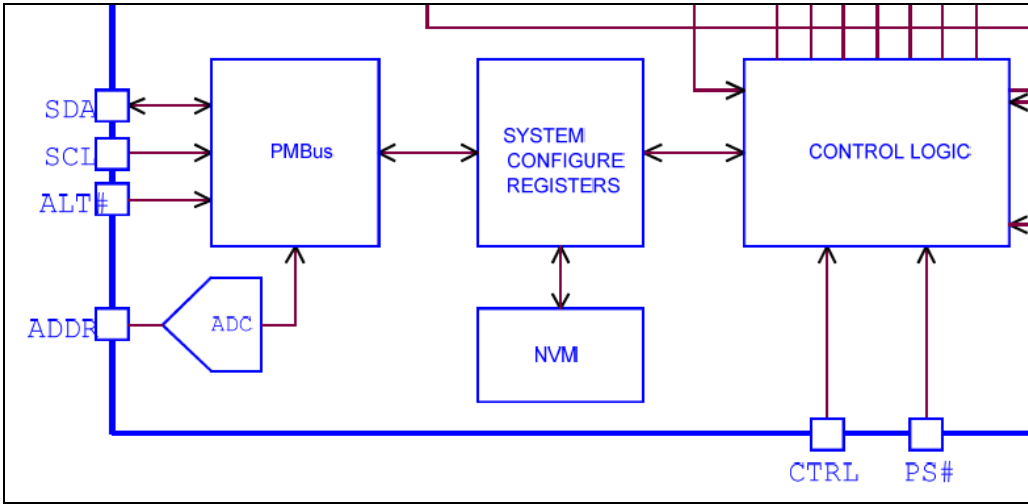
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>and a clock line (SCL), that allows for configuration of the power module and monitoring of key parameters. MPM3695 Data Sheet at 1, 29.</p>
<p>a storage device adapted to store output data received externally via said serial data bus interface;</p>	<p>The MPM3695 power modules comprise a storage device adapted to store output data received externally via said serial data bus interface.</p> <p>The data received by the power module from its PMBus interface are written to specific registers and moved into non-volatile memory (<i>e.g.</i>, Multiple Time Program or MTP cells). MPM3695-25 Data Sheet at 32-34, 36 (STORE_USER_ALL command).</p>  <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
<p>a control unit adapted to calculate at least one timing parameter based on said output data; and</p>	<p>The MPM3695 power modules comprise a control unit adapted to calculate at least one timing parameter based on said output data.</p> <p>The output data received by the power module from its PMBus interface is also used (<i>i.e.</i>, by the control logic) to calculate a timing parameter for the power module.</p>

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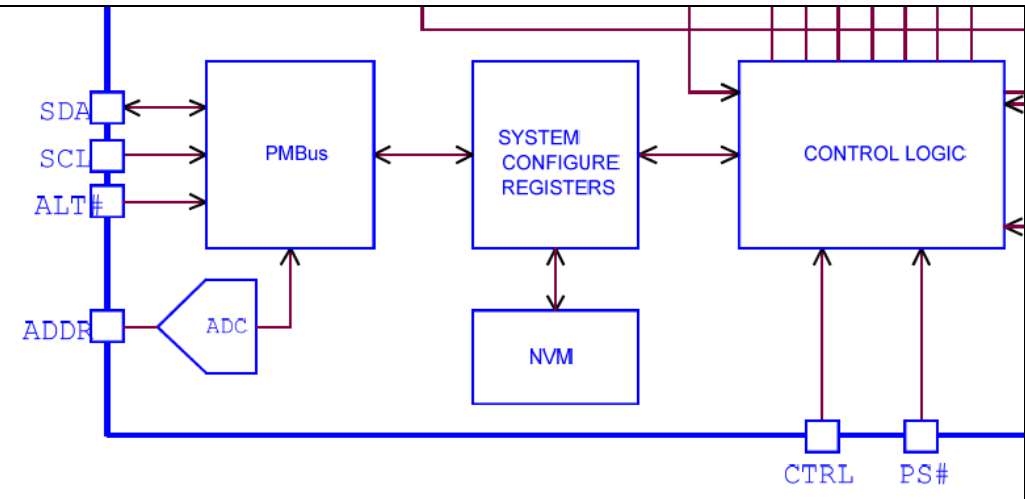
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>MPM3695-25 Data Sheet at 19 (cropped for clarity). The output data received by the MPM3695, for example, are used to determine a corresponding command for turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY). MPM3695-25 Data Sheet at 42.</p>
an output builder adapted to generate an output voltage in accordance with said at least one timing parameter;	<p>The MPM3695 power modules comprise an output builder adapted to generate an output voltage in accordance with said at least one timing parameter.</p> <p>The MPM3695 provides an output voltage to a connected load, with output voltage parameters being programmable via the PMBus. MPM3695 Data Sheet at 23.</p>

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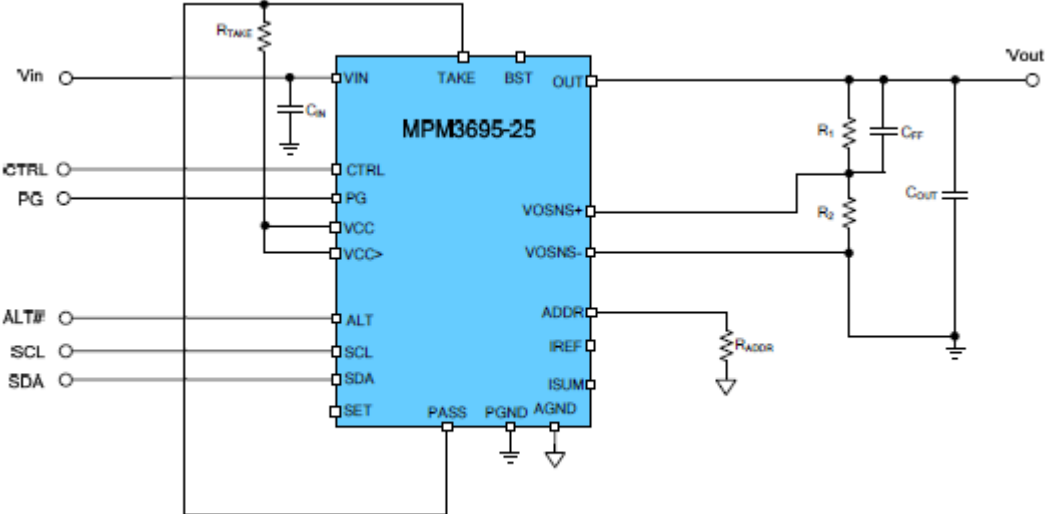
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p style="text-align: center;">Single Phase Operation</p> <p>MPM3695 Data Sheet at 2.</p>

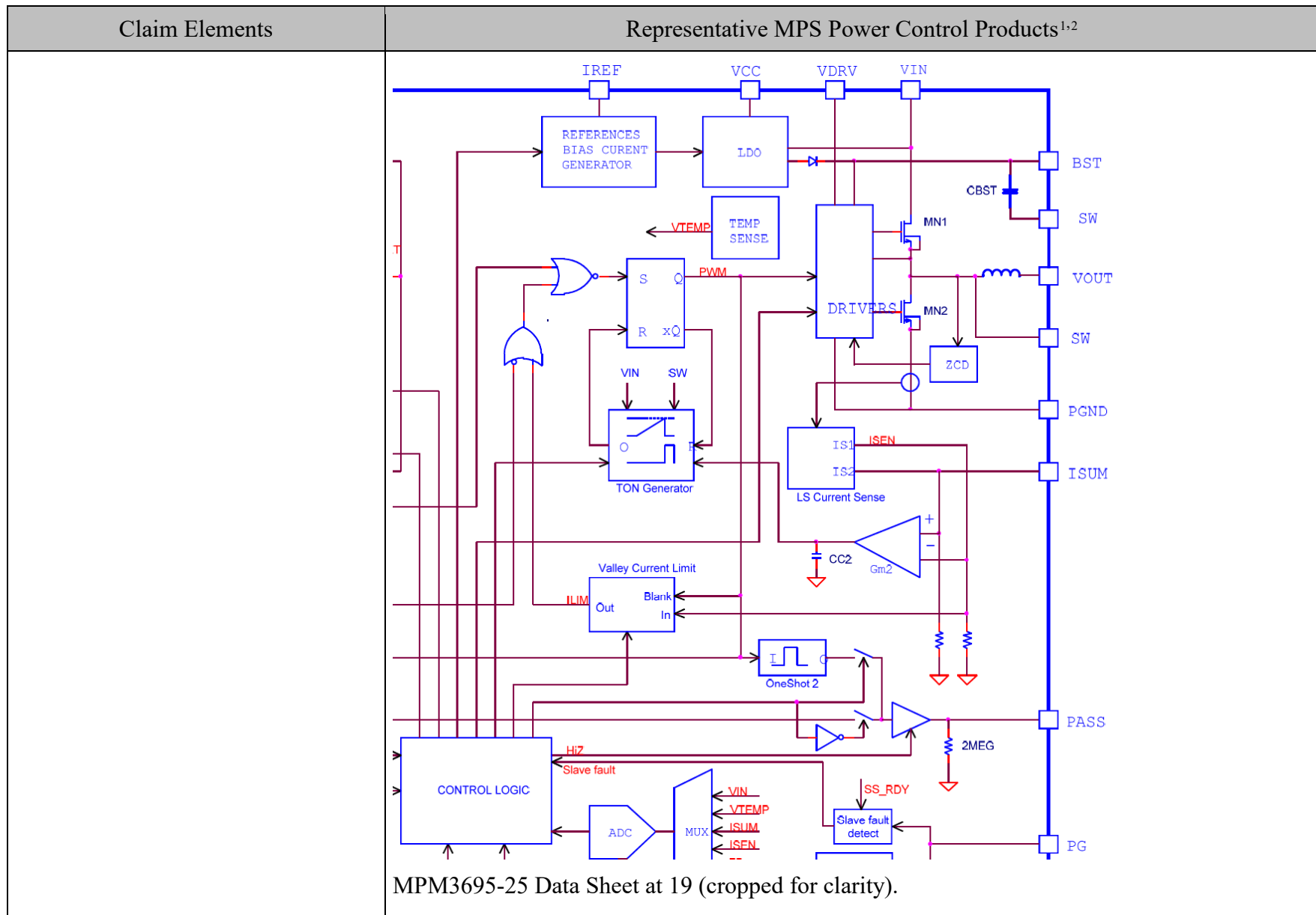
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Claim Elements	Representative MPS Power Control Products ^{1,2}
<p>wherein said output data further comprises turn-on data and said control unit is further adapted to calculate a turn-on period of time that is to be waited before said control unit produces said output voltage, said turn on data being used to calculate said turn-on period of time.</p>	<p>Per the discussion above, the output data received by the MPM3695 is used to determine a corresponding command for turn-on rise and delay (TON_RISE and TON_DELAY). MPM3695-25 Data Sheet at 42. The values associated with the commands are then used to calculate a turn-on period of time that is to be waited before said control unit produces said output voltage.</p>
<p>26. A point-of-load regulator comprising:</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, comprise a point-of-load regulator.</p> <p>The MPM3695 power modules comprise point-of-load regulators that accept varied input voltages and generate varied output voltages to an attached load. <i>See, e.g.</i>, MPM3695-10 Data Sheet at 1; MPM3695-25 Data Sheet at 1; MPM3695-100 Data Sheet at 1.</p> <p>MPS touts the “scalability” and “programmability” of the power modules as significant features. MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at 2 (“Figure 5: MPM3695 Series Offers Scalability and Programmability”); <i>see also</i> https://www.monolithicpower.com/en/products/power-modules.html (last accessed June 11, 2021); Power Module Flyer at 1.</p> <p>The power modules, for instance, are programmed and controlled over a Power Management Bus (or PMBus):</p>

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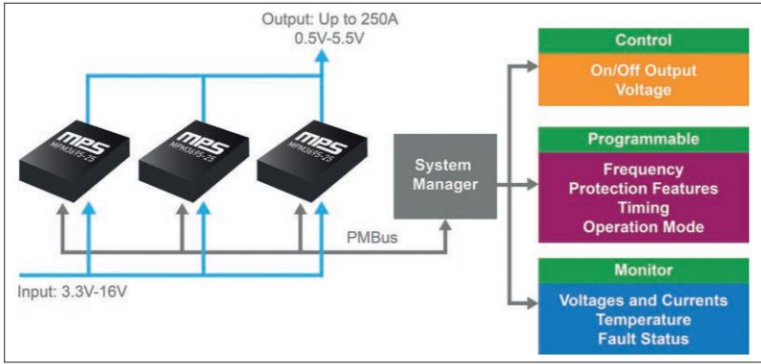
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5; <i>see also</i> MPM3695-10 Data Sheet at 1 (“The MPM3695-10 is a scalable, ultra-thin, fully integrated power module with a PMBus interface . . . [that] offers module configurability.”); MPM3695-25 Data Sheet at 1 (“The MPM3695-25 is a scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations” with various parameters being “[p]rogrammable via PMBus.”); MPM3695-100 Data Sheet at 1 (“The MPM3695-100 is a 100A, scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations.”).</p> <p>The timing parameters of the MPM3695, for instance, are set over the PMBus. These programmable timing parameters include a turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), MPM3695-25 Data Sheet at 42, and a slew rate of an output voltage transition (via the MFR_VOUT_STEP command), MPM3695-25 Data Sheet at 50. Once set, these parameters are used to affect a desired output by the power module. MPM3695-25 Data Sheet at 8, 32-34.</p>
a serial data bus interface;	<p>The MPM3695 power modules comprise a serial data bus interface.</p> <p>As discussed above, the MPS power modules are programmed over a PMBus. The MPM3695, for example, “is a scalable, fully integrated power module with a PMBus interface.” MPM3695 Data Sheet at 1. The PMBus is a bidirectional serial interface, consisting of a data line (SDA)</p>

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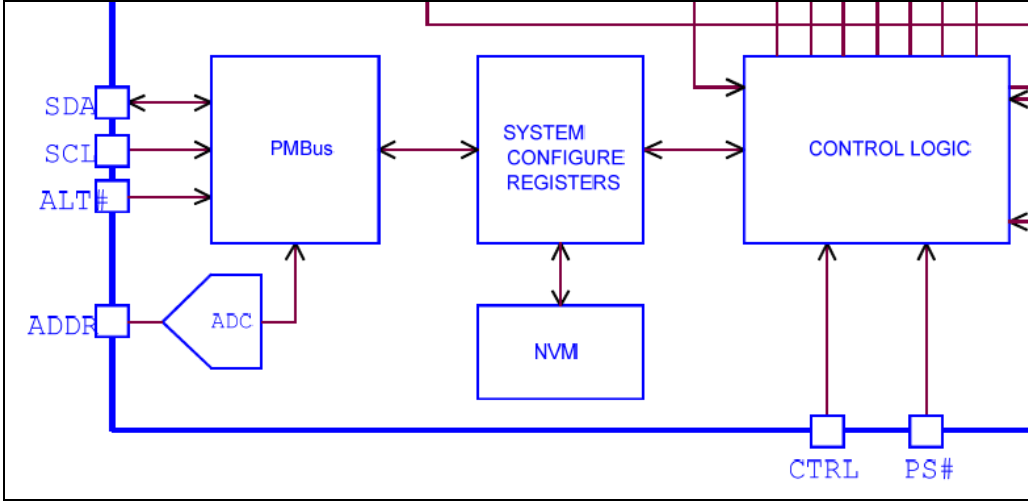
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>and a clock line (SCL), that allows for configuration of the power module and monitoring of key parameters. MPM3695 Data Sheet at 1, 29.</p>
<p>a storage device adapted to store output data received externally via said serial data bus interface;</p>	<p>The MPM3695 power modules comprise a storage device adapted to store output data received externally via said serial data bus interface.</p> <p>The data received by the power module from its PMBus interface are written to specific registers and moved into non-volatile memory (<i>e.g.</i>, Multiple Time Program or MTP cells). MPM3695-25 Data Sheet at 32-34, 36 (STORE_USER_ALL command).</p>  <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
<p>a control unit adapted to calculate at least one timing parameter based on said output data; and</p>	<p>The MPM3695 power modules comprise a control unit adapted to calculate at least one timing parameter based on said output data.</p> <p>The output data received by the power module from its PMBus interface is also used (<i>i.e.</i>, by the control logic) to calculate a timing parameter for the power module.</p>

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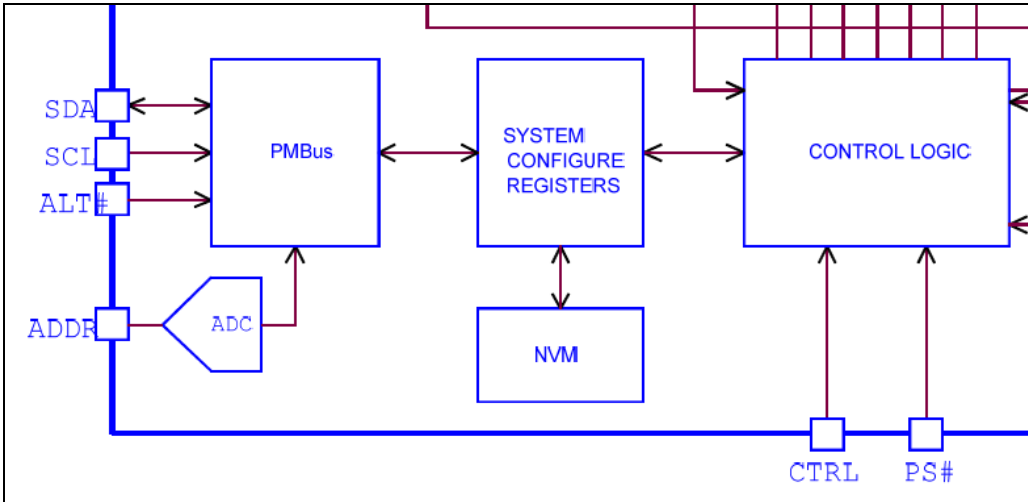
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p data-bbox="688 781 1915 922">MPM3695-25 Data Sheet at 19 (cropped for clarity). The output data received by the MPM3695, for example, are used to determine a corresponding command for turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY). MPM3695-25 Data Sheet at 42.</p>
an output builder adapted to generate an output voltage in accordance with said at least one timing parameter;	<p data-bbox="688 966 1915 1036">The MPM3695 power modules comprise an output builder adapted to generate an output voltage in accordance with said at least one timing parameter.</p> <p data-bbox="688 1052 1915 1122">The MPM3695 provides an output voltage to a connected load, with output voltage parameters being programmable via the PMBus. MPM3695 Data Sheet at 23.</p>

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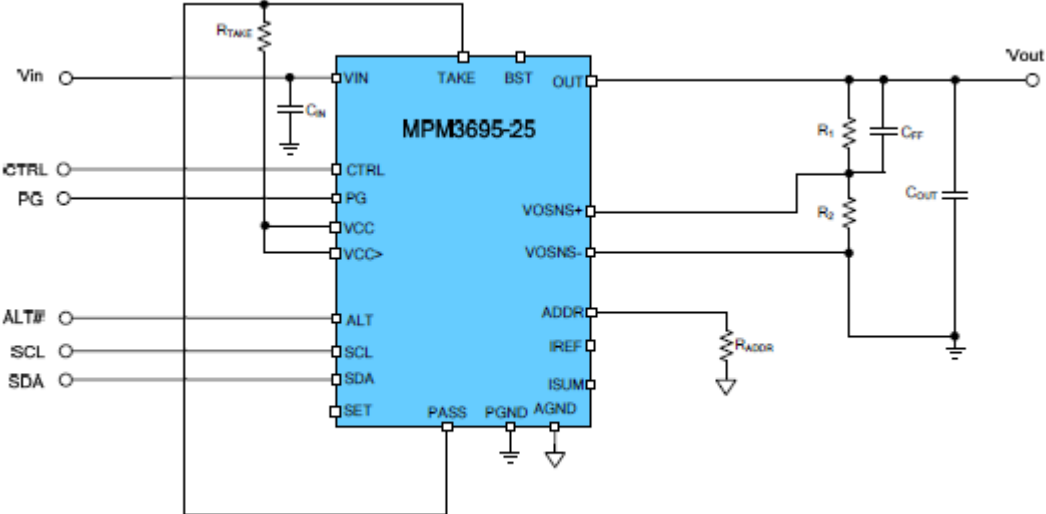
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p style="text-align: center;">Single Phase Operation</p> <p>MPM3695 Data Sheet at 2.</p>

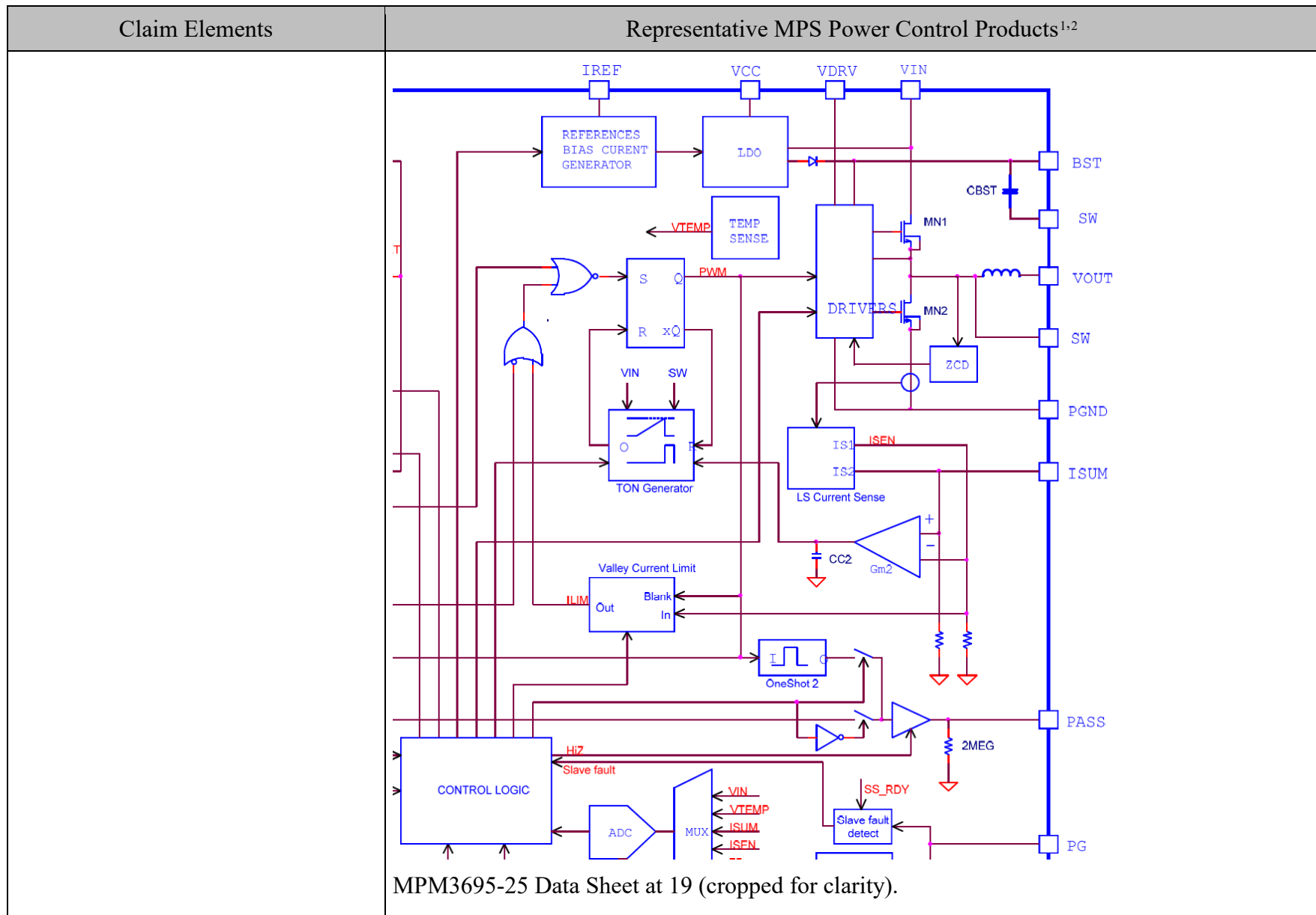
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Claim Elements	Representative MPS Power Control Products ^{1,2}
<p>wherein said output data further comprises at least one of turn-on data providing a command to turn-on the corresponding POL regulator, voltage set-point data providing a desired output voltage of the corresponding POL regulator, slew-rate data providing a rate of change of output voltage of the corresponding POL regulator, sequencing data providing a delay period between execution of other functions by the corresponding POL regulator, and turn-off data providing a command to turn off the corresponding POL regulator.</p>	<p>As discussed above, the output data received by the MPM3695 is used to place the regulator into operation (<i>i.e.</i>, based on an OPERATION and/or ON_OFF_CONFIG command), or adjust voltage set-point (VOUT_COMMAND), turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), and voltage transition slew rate (MFR_VOUT_STEP). MPM3695 Data Sheet at 35, 42, 50.</p>
<p>27. A point-of-load regulator comprising:</p>	<p>The MPM3695 family of power modules, including at least the MPM3695-10, MPM3695-25, and MPM3695-100 power modules, comprise a point-of-load regulator.</p> <p>The MPM3695 power modules comprise point-of-load regulators that accept varied input voltages and generate varied output voltages to an attached load. <i>See, e.g.</i>, MPM3695-10 Data Sheet at 1; MPM3695-25 Data Sheet at 1; MPM3695-100 Data Sheet at 1.</p> <p>MPS touts the “scalability” and “programmability” of the power modules as significant features. MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at 2 (“Figure 5: MPM3695 Series Offers Scalability and Programmability”); <i>see also</i> https://www.monolithicpower.com/en/products/power-modules.html (last accessed June 11, 2021); Power Module Flyer at 1.</p> <p>The power modules, for instance, are programmed and controlled over a Power Management Bus (or PMBus):</p>

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

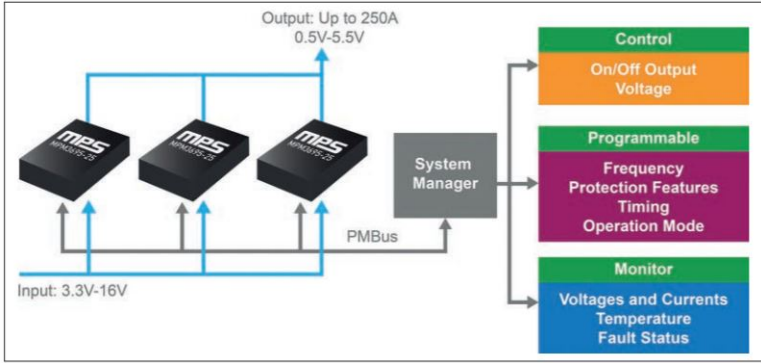
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>The diagram illustrates a scalable DC-DC power system. Three MPS power modules are connected to a common input of 3.3V-16V. Each module's output is connected to a common output line that provides up to 250A at 0.5V-5.5V. A System Manager is connected to the modules via a PMBus interface. The System Manager provides control signals to the modules and receives feedback data. The feedback data is categorized into three main functional areas:</p> <ul style="list-style-type: none"> Control: On/Off Output Voltage Programmable: Frequency Protection Features, Timing, Operation Mode Monitor: Voltages and Currents, Temperature, Fault Status <p>MPS (Yang <i>et al.</i>), <i>Intelligent Scalable DC-DC Power Modules</i> at Fig. 5; <i>see also</i> MPM3695-10 Data Sheet at 1 (“The MPM3695-10 is a scalable, ultra-thin, fully integrated power module with a PMBus interface . . . [that] offers module configurability.”); MPM3695-25 Data Sheet at 1 (“The MPM3695-25 is a scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations” with various parameters being “[p]rogrammable via PMBus.”); MPM3695-100 Data Sheet at 1 (“The MPM3695-100 is a 100A, scalable, fully integrated power module with a PMBus interface . . . [that] provides module configurations.”).</p> <p>The timing parameters of the MPM3695, for instance, are set over the PMBus. These programmable timing parameters include a turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY), MPM3695-25 Data Sheet at 42, and a slew rate of an output voltage transition (via the MFR_VOUT_STEP command), MPM3695-25 Data Sheet at 50. Once set, these parameters are used to affect a desired output by the power module. MPM3695-25 Data Sheet at 8, 32-34.</p>
a serial data bus interface;	<p>The MPM3695 power modules comprise a serial data bus interface.</p> <p>As discussed above, the MPS power modules are programmed over a PMBus. The MPM3695, for example, “is a scalable, fully integrated power module with a PMBus interface.” MPM3695</p>

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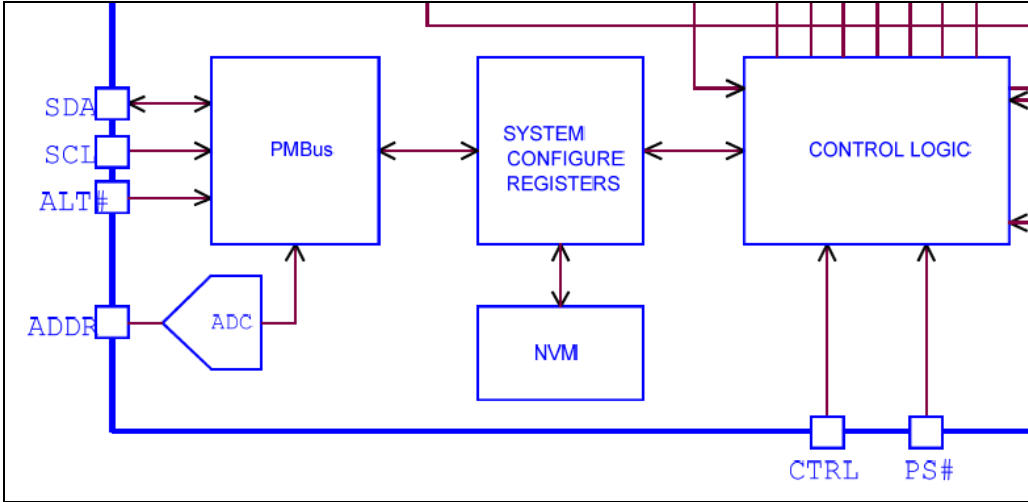
Claim Elements	Representative MPS Power Control Products ^{1,2}
	<p>Data Sheet at 1. The PMBus is a bidirectional serial interface, consisting of a data line (SDA) and a clock line (SCL), that allows for configuration of the power module and monitoring of key parameters. MPM3695 Data Sheet at 1, 29.</p>
<p>a storage device adapted to store output data received externally via said serial data bus interface;</p>	<p>The MPM3695 power modules comprise a storage device adapted to store output data received externally via said serial data bus interface.</p> <p>The data received by the power module from its PMBus interface are written to specific registers and moved into non-volatile memory (<i>e.g.</i>, Multiple Time Program or MTP cells). MPM3695-25 Data Sheet at 32-34, 36 (STORE_USER_ALL command).</p>  <p>MPM3695-25 Data Sheet at 19 (cropped for clarity).</p>
<p>a control unit adapted to calculate at least one timing parameter based on said output data; and</p>	<p>The MPM3695 power modules comprise a control unit adapted to calculate at least one timing parameter based on said output data.</p> <p>The output data received by the power module from its PMBus interface is also used (<i>i.e.</i>, by the control logic) to calculate a timing parameter for the power module.</p>

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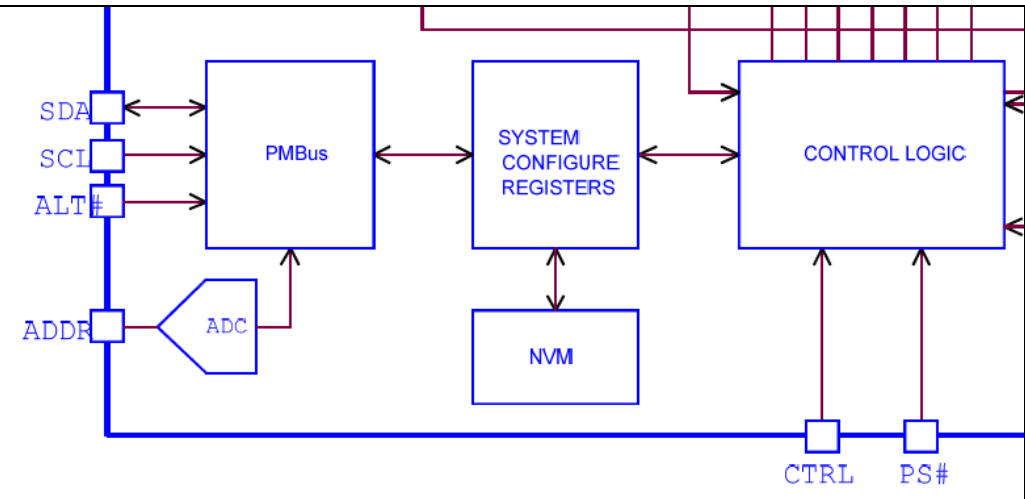
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p>MPM3695-25 Data Sheet at 19 (cropped for clarity). The output data received by the MPM3695, for example, are used to determine a corresponding command for turn-on rise/delay and turn-off delay (TON_RISE, TON_DELAY and TOFF_DELAY). MPM3695-25 Data Sheet at 42.</p>
an output builder adapted to generate an output voltage in accordance with said at least one timing parameter;	<p>The MPM3695 power modules comprise an output builder adapted to generate an output voltage in accordance with said at least one timing parameter.</p> <p>The MPM3695 provides an output voltage to a connected load, with output voltage parameters being programmable via the PMBus. MPM3695 Data Sheet at 23.</p>

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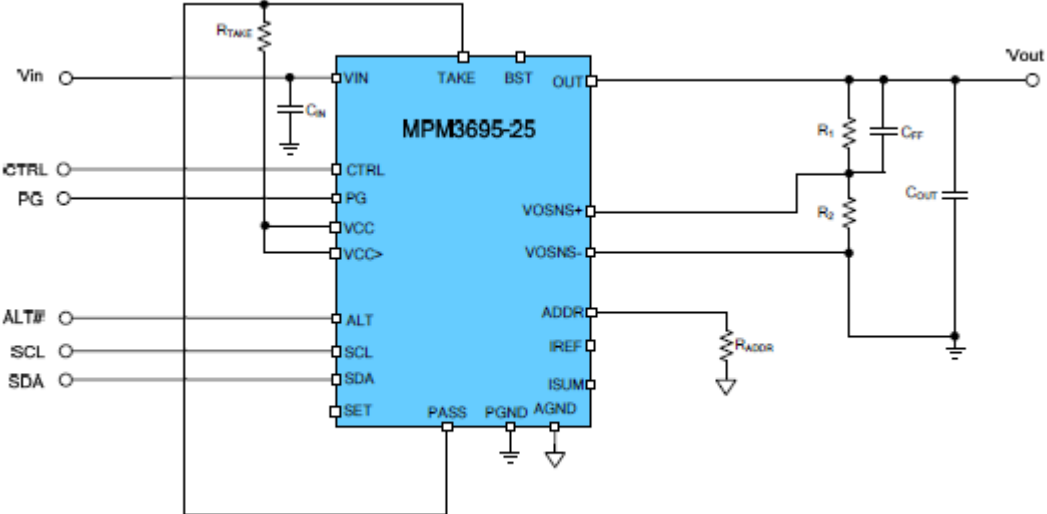
Claim Elements	Representative MPS Power Control Products ^{1,2}
	 <p style="text-align: center;">Single Phase Operation</p> <p>MPM3695 Data Sheet at 2.</p>

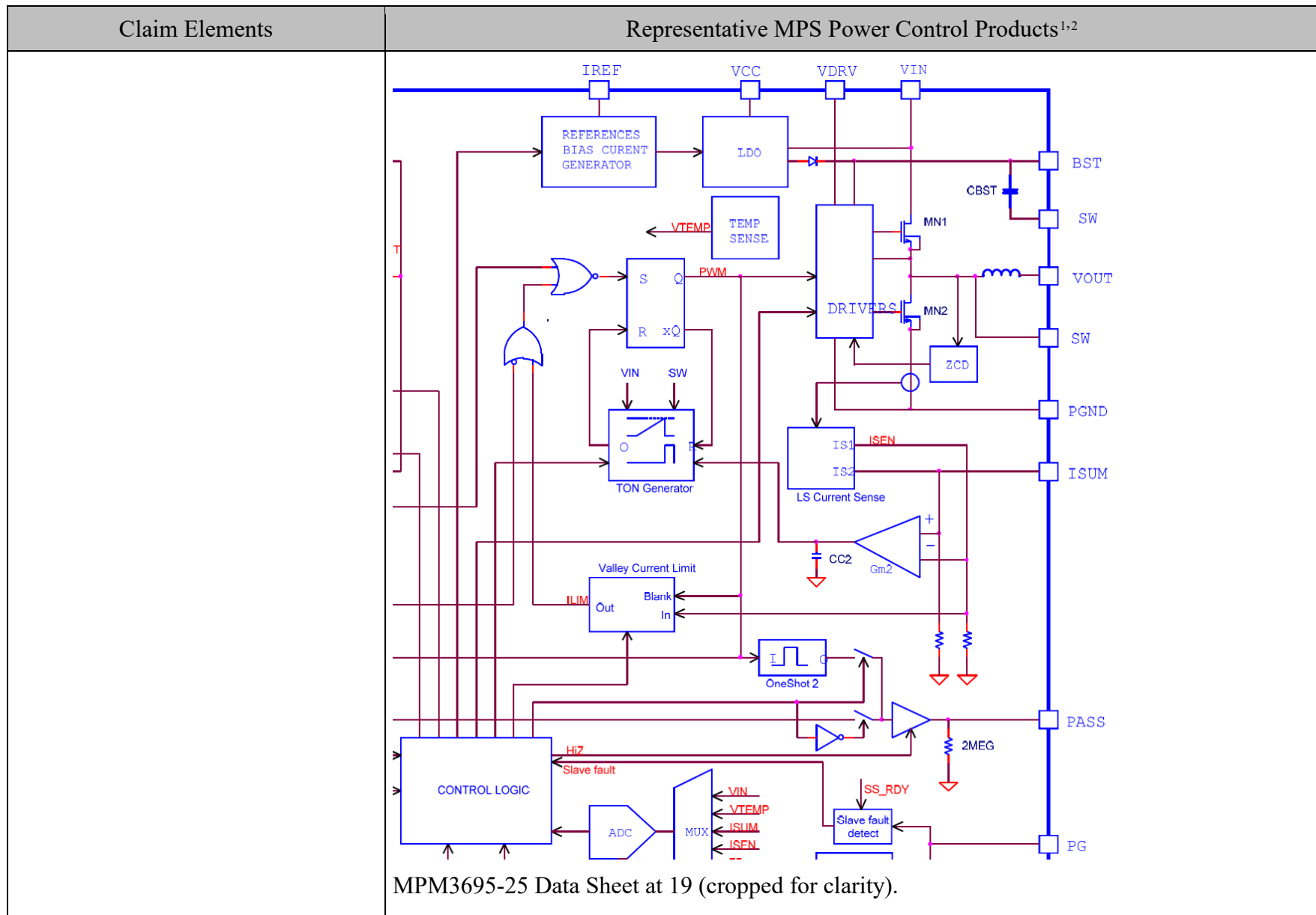
Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Exhibit G – Infringement of U.S. Patent No 6,936,999 by MPS Power Control Products

Claim Elements	Representative MPS Power Control Products ^{1,2}
wherein said control unit is further adapted to determine a turn-on period to generate a desired output in accordance with at least one of said turn-on data, said sequencing data, said slew rate data, and said voltage set point data.	As discussed above, the output data received by the MPM3695 are used to place the regulator into operation (<i>i.e.</i> , based on an OPERATION and/or ON_OFF_CONFIG command), or adjust voltage set-point (VOUT_COMMAND), turn-on rise/delay (TON_RISE, TON_DELAY), and voltage transition slew rate (MFR_VOUT_STEP). MPM3695 Data Sheet at 35, 42, 50. The values associated with the commands are then used to determine a turn-on period to generate a desired output.
28. The point-of-load regulator of claim 27, wherein said turn-on period is provided in said sequencing data.	As discussed above, the output data received by the MPM3695 are used to determine a corresponding command for turn-on rise and delay (TON_RISE, TON_DELAY), which constitute sequencing data. MPM3695-25 Data Sheet at 42.
29. The point-of-load regulator of claim 27, wherein said turn-on period is calculated by said control unit using said sequencing data, said slew rate data, and said voltage set point data.	As discussed above, where the values associated with the adjust voltage set-point (VOUT_COMMAND), turn-on rise/delay (TON_RISE, TON_DELAY), and voltage transition slew rate (MFR_VOUT_STEP) are used to calculate a turn-on period.
30. The point-of-load regulator of claim 26, wherein said control unit is further adapted to determine a turn-off period of time to terminate a selected output in accordance with at least one of said turn-off data, said sequencing data, said slew rate data, and said voltage set point data.	As discussed above, the output data received by the MPM3695 are used to place the regulator into operation (<i>i.e.</i> , based on an OPERATION and/or ON_OFF_CONFIG command), or adjust voltage set-point (VOUT_COMMAND), turn-off delay (TOFF_DELAY), and voltage transition slew rate (MFR_VOUT_STEP). MPM3695 Data Sheet at 35, 42, 50. The values associated with the commands are then used to determine a turn-off period to generate a desired output.
31. The point-of-load regulator	As discussed above, the output data received by the MPM3695 are used to determine a

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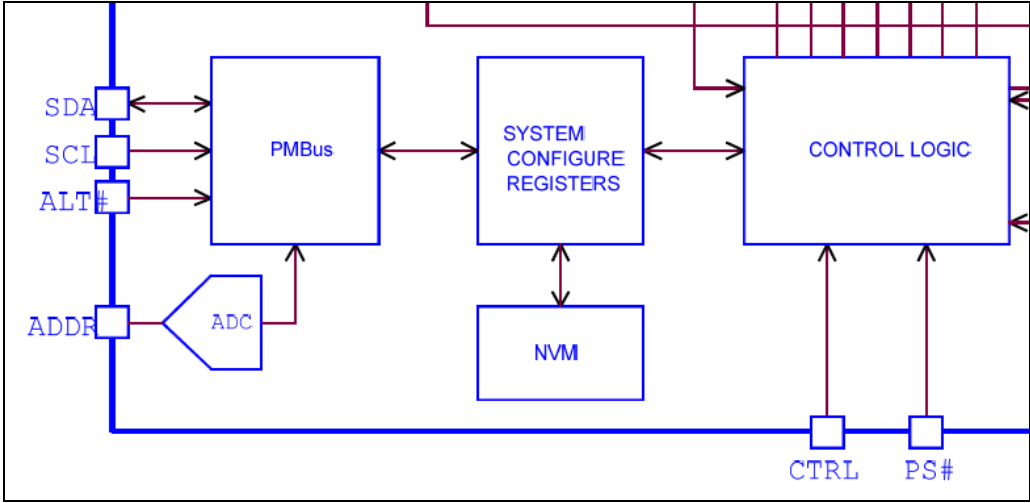
Claim Elements	Representative MPS Power Control Products ^{1,2}
of claim 30, wherein said turn-off period is provided in said sequencing data.	corresponding command for turn-off delay (TOFF_DELAY), which constitute sequencing data. MPM3695-25 Data Sheet at 42.
32. The point-of-load regulator of claim 30, wherein said turn-off period is calculated by said control unit using said sequencing data, said slew rate data, and said voltage set point data.	As discussed above, the values associated with the adjust voltage set-point (VOUT_COMMAND), turn-on rise/delay and turn-off delay (TOFF_DELAY), and voltage transition slew rate (MFR_VOUT_STEP) are used by the MPM3695 to calculate a turn-off period.
33. The point-of-load regulator of claim 21, wherein said storage device further comprises at least one register.	<p>The MPM3695 power modules comprise a storage device that comprises at least one register. As discussed above, the data received by the power module from its PMBus interface are written to specific registers. MPM3695-25 Data Sheet at 32-34, 36 (STORE_USER_ALL command).</p> 

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Claim Elements	Representative MPS Power Control Products ^{1,2}
	MPM3695-25 Data Sheet at 19 (cropped for clarity).
34. The power control system of claim 4, wherein said turn-off period is provided in said sequencing data.	As discussed above, the output data received by the MPM3695 are used to determine a corresponding command for turn-off delay (TOFF_DELAY), which constitute sequencing data. MPM3695-25 Data Sheet at 42.
35. The power control system of claim 4, wherein said turn-off period is calculated by said control unit using said sequencing data, said slew rate data, and said voltage set point data.	As discussed above, the values associated with the adjust voltage set-point (VOUT_COMMAND), turn-on rise/delay and turn-off delay (TOFF_DELAY), and voltage transition slew rate (MFR_VOUT_STEP) are used by the MPM3695 to calculate a turn-off period.